



1971-72 Undergraduate
Catalog of Curricula and Courses

Ohio University Bulletin



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Ohio University Bulletin



The fees, programs and requirements contained in this bulletin are effective with the 1971 fall quarter. They are necessarily subject to change without notice at the discretion of the University.

Produced by the Office of University Publications, Don F. Stout, Director
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Academic Calendar 1971-72

Fall Quarter, 1971

- Sept. 20, Mon. Class schedule adjustment day
Sept. 21, Tues. Registration day
Sept. 22, Wed. Classes begin
Oct. 1, Fri. Last day to register for quarter
 Last day to register for Pass/Fail option
 Last day to add courses
 Last day for partial refund of registration fees
 Last day for filing application and paying fee for
 conferral of degree on December 11
Oct. 12, Tues. Last day to drop courses
Nov. 8 - 11 Winter quarter preregistration
Nov. 24, Wed. Thanksgiving vacation begins at noon
Nov. 29, Mon. Classes resume with first scheduled class
Dec. 4, Sat. Last day of classes
Dec. 6, Mon. Examinations begin
Dec. 11, Sat. Quarter closing date

Winter Quarter, 1972

- Jan. 3, Mon. Class schedule adjustment day;
 Registration day
Jan. 4, Tues. Classes begin
Jan. 13, Thurs. Last day to register for quarter
 Last day to register for Pass/Fail option
 Last day to add courses
 Last day for partial refund of registration fees
 Last day for filing application and paying fee for
 conferral of degree on March 18
Jan. 24, Mon. Last day to drop courses
Feb. 7 - 10 Spring quarter preregistration
Mar. 11, Sat. Last day of classes
Mar. 13, Mon. Examinations begin
Mar. 18, Sat. Quarter closing date

Spring Quarter, 1972

- Mar. 27, Mon. Class schedule adjustment day
 Registration day
Mar. 28, Tues. Classes begin
Apr. 6, Thurs. Last day to register for quarter
 Last day to register for Pass/Fail option
 Last day to add courses
 Last day for partial refund of registration fees
 Last day for filing application and paying fee for
 conferral of degree on June 11

Apr. 17, Mon. Last day to drop courses
 May 15 - 18 Fall quarter preregistration
 May 29, Mon. Memorial Day holiday
 Jun. 3, Sat. Last day of classes
 Jun. 5, Mon. Examinations begin
 Jun. 10, Sat. Quarter closing date
 Annual Commencement

Summer Quarter, 1972

First Term

Jun. 19, Mon. Registration day
 Jun. 20, Tues. Classes begin
 Jun. 26, Mon. Last day to register for first 5-week term
 Last day to register for Pass/Fail option
 Last day to add courses
 Last day for partial refund of registration fees
 Last day for undergraduate student to file applica-
 tion and pay fee for conferral of degree on
 August 26
 Last day for graduate student to file applica-
 tion and pay fee for conferral of degree on
 August 26
 June 29, Thurs. Last day to drop courses
 Jul. 4, Tues. Independence Day holiday
 Jul. 21, Fri. Last day of classes; examinations
 Jul. 22, Sat. Term closing date

Second Term

Jul. 24, Mon. Registration day; classes begin
 Jul. 31, Mon. Last day to register for second 5-week term
 Last day to register for Pass/Fail option
 Last day to add courses
 Last day for partial refund of registration fees
 Last day for undergraduate student to file applica-
 tion and pay fee for conferral of degree on
 August 26
 Graduate student must have filed June 26
 Aug. 3, Thurs. Last day to drop courses
 Aug. 25, Fri. Last day of classes; examinations
 Aug. 26, Sat. Quarter closing date

Address Inquiries Concerning:

Admissions information, acceptance of credits, transfer students and campus tours to the Office of Admissions,
Jerry D. Reese, A.B., *Director*

Registration, class schedules and veterans' affairs to the Office of Registration, John R. O'Neal, M.Ed., *Dean*

Housing to the Office of University Housing,
Robert R. Hynes, M.Ed., *Director*

Financial aids, scholarships, loans and student employment to the Office of Student Financial Aids,
Michael M. L'Heureux, M.Ed., *Director*

Continuing education, correspondence study, workshops, conferences or institutes to the Extension Division,
Curtis M. Johnson, M.A., *Director*

Intercollegiate Athletics, William D. Rohr, M.Ed., *Director*

Curricula and undergraduate degree requirements to the office of the dean of the college in question.

The Colleges and Curricula



The University College

Don M. Flourney, *Dean*

James S. Hartman, *Assistant Dean*

William L. Allen, *Assistant to the Dean*

All freshmen enroll in the University College, which concerns itself primarily with the progress of students during their first year and until they qualify for advancement to a degree program, or until they complete the requirements for the associate in arts degree. One year in the University College and the following three years in one of the other degree colleges represent the normal pattern for completing the baccalaureate degree. In addition, the University College provides an opportunity, through the Bachelor of General Studies Program, for the student with general or highly individualized interests to complete a baccalaureate degree on a non-major basis. The student and his adviser will plan his academic program to maximize his capabilities and prepare for those positions open to students without prescribed curricular patterns.

The University College is also concerned with precollege counseling, which takes place in July and August. This orientation period is designed to acquaint incoming freshmen with the University's academic programs and to complete initial enrollment for fall quarter classes.

Each student is assigned to a faculty counselor whose professional interest is similar to that of the student. Throughout the year the student may confer with his counselor; at the beginning of each quarter for a review of schedule preparations, at the

midterm (sixth week) for a review of progress and at other times when advice or assistance is needed. Personal conferences may also be arranged with members of the University College staff and appointments may be made with the dean of the University College. Many upperclassmen will continue to consult with their freshman faculty counselors since their degree colleges will usually continue their freshmen counselor assignment.

The courses in the freshman year are planned to provide studies generally recognized as essential to the educated person and they form a broad preparation for later specialization. General course recommendations complement the work done in high school and also take into account the specific educational objective of the student.

Student Development Program

The University College conducts a student development program which is designed to help the student complete University level work. Supporting services include counseling, tutoring, reading, writing and speech improvement, as well as group instruction in special subjects and other techniques by which the student having difficulty may receive assistance. No extra fees are charged for these services since they are supported by a special grant from the State of Ohio.

Course Areas for University College Students

Students in the University College are encouraged at entry to follow the requirements of degree programs. There are no freshman requirements common to all students; if a student has a tentative major he should refer to those requirements as outlined in the catalog and the University College Bulletin. The following courses are available to students at the freshman level:

General Education

One year in each of two of the following groups is recommended as a preparation for degree programs. Recommendations based on courses not completed in high school are indicated for each area: humanities, mathematics, natural science and social science.

HUMANITIES

Mod lang 111, 112, 113 (4, 4, 4).

Phil 101, 102, 103 (3, 3, 3).

Eng 177, 178, 179; 187, 188, 189;
189A, H197, H198, H199 (all are 5 hours).

Great books 107, 108, 109 (3, 3, 3).

CL 101, 102, 103 (4, 4, 4).

CA 117, 118, 119 (3, 3, 3).

MATHEMATICS

Math 113 (5); 116 (2); 140A-B (5-5);
263A-B-C (5-5-5) H197, H198, H199
(5, 5, 5).

Students are strongly urged to complete algebra and Euclidean geometry in high school since they are prerequisites for all college mathematics courses.

NATURAL SCIENCES

Biological sciences: Bot 101, 102; Zool 101, 103, 203 (5, 5, 5, 5, 5).

Physical sciences: Chem 121, 122, 123 (5, 4, 4) or 121, 142, 143 (5, 5, 5) or H190, H191 (4, 4); Geog 101, 201, 211, (3, 5, 4); Geol 101, 102, 103 (4, 4, 3); PSc 101, 102, 103 (4, 3, 3), H197, H198, H199 (4, 3, 3); Phys 201, 202, 203 (4, 4, 4) or 251, 252, 253 (5, 5, 5).

SOCIAL SCIENCES

Econ 101, 102 (4, 4); Geog 121 (3); Govt 101, 102 (4, 4); Hist 101, 102, 103 (4, 4, 4); Psy 101, 103 (5, 4); Soc 101 (5); Anth 270 (5). International Studies

101, 102 (Africa) (4, 4), 103, 104 (Asia) (4, 4).

Speech: InCo 101, 103, 215 (3, 4, 3).

One of these courses is recommended for entering students in the first, second or third quarter of the freshman year, unless his high school experience includes speech or he passes a speech proficiency test. One of these courses may be required for certain degree programs.

PHYSICAL EDUCATION

Men: HPER 100A-101D; Women: HPER 100A-101D.

Physical education courses are required for teacher certification.

In addition, freshmen are offered many courses which are not a part of the area recommendations. The student is encouraged to choose from these elective courses those which may help him determine his interests and capabilities for some major area of study.

A selection may also be made from a particular group on the basis of future requirements of a particular curriculum. For example, a student who is expecting to pursue a program in arts and sciences and thus have a foreign language requirement will choose a language course. A student expecting to enter the College of Fine Arts may want to schedule CA 117-118-119 as his humanities subject.

The student who is undecided or uncommitted as to his educational pattern will find that the University College offers an opportunity to explore various fields of knowledge and disciplines so that a choice will represent a selection made on a broad informational base. Detailed recommendations for the freshman pattern of courses for the various areas of concentration will be available at Precollege each year and through the University College Bulletin.

Student Hour Load

It is recommended that the student schedule 15 hours of credit per quarter. The maximum load should usually not exceed 17 hours. After the first quarter a student achieving a 2.5 grade average may qualify for an 18 hour load, a 3.0 qualifies for a 19 hour load and 3.5 qualifies for the maximum of 20 hours. An exception to

the above regulation to carry a load in excess of the maximum must be approved by the dean of the University College. The maximum load for a student admitted as a special student is 11 credit hours. A special student may register for more than 11 credit hours if given permission by the dean of University College.

Advancement To a Degree Program

At the end of three quarters a student may be advanced to another degree college of his choice or to the Bachelor of General Studies Program in the University College provided he has earned 45 hours of credit and is not on probation. Advancement to the College of Education requires the completion of Psy 101. Students should qualify for advancement following the completion of no more than eight quarters of work in the University College.

Bachelor of General Studies Degree

The Bachelor of General Studies Program provides an opportunity for that student who is willing to take the risks which follow upon his decision to design his own education. The student with an unusual combination of talents or an exceptional background or a special intensity of motivation will clearly find this degree useful in attaining his goals. The program assumes that the student who comes to the University to find out who he is and what he wants to become has a legitimate claim upon its services.

Even though actual degree requirements will be established primarily by the individual student, the program does not offer total freedom. Course prerequisites and other such factors will still be binding upon the general studies student. Both those who have well-defined objectives and those who seek to use the bachelor of general studies as a means of self-discovery will find the advising system of the program useful. Not the least important feature of this program is that it allows a more meaningful advising relationship simply because the nature of the discussion between adviser and student no

longer is restricted by or to catalog regulations. A list of University College advisers and their special areas of competence and interests is available at the University College Office. These advisers may assist the student in composing his application and will be available to discuss his program as he moves through it.

Ohio University has established the Bachelor of General Studies Program in response to an awareness that the existing degree programs, as many and as varied as they are, cannot satisfy legitimate requirements of all students. Those seeking to enter the graduate schools or the established professions may find that following the patterns suggested by the various disciplines is more useful to them simply because the standard degrees have wider currency in the world and will more quickly suggest the nature of their academic accomplishments to others.

To enter the Bachelor of General Studies Program, the student must complete an application which may be obtained in the University College Office. A student must have completed 45 hours of credit before being advanced to the BGS program, although he may apply during the quarter in which he expects to complete 45 hours. Basic requirements for the bachelor of general studies degree are:

1. 180 quarter hours of credit, at least half of which are to be in junior-senior level courses.
2. A 2.0 accumulative grade point average, based on the 180 credit hours.
3. No fewer than 45 hours of credit to be taken *after* having been admitted to the program.

Terminal Program Leading to The Associate in Arts Degree

The University College offers a program of study for the student who does not intend to complete a four-year degree program and who plans to spend only two years at the University. Its completion leads to the associate degree.

The associate in arts program includes English, speech and other general education and career courses. The student must complete a minimum of 90 hours with a 2.0

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average at graduation in no more than eight regular quarters. Application for the degree is made at the Office of Registration at the time announced for all degree candidates and must be accompanied by a fee of \$7.50.

The curricula for terminal programs furnish the student with a background to certain professional schools or for employment. General curricula leading to unlabeled degrees include aviation, business, home economics, journalism, metalworking, premortuary science, prepharmacy, pre-veterinary medicine and recreation leadership. Specific curricula leading to labeled degrees include radio-television (either technology or radio-performance) at Zanesville, nursing (associate in science degree) at Zanesville and Portsmouth, library technical assistant at Lancaster and mental health technology at Athens. Additional curricula are available and a special terminal program may be planned to meet the needs of the student.

When the student decides to pursue one of these programs, he confers with his counselor and prepares an outline of necessary courses. This outline is filed with the University College Office. Credit earned while enrolled in a terminal program may be counted toward a four-year degree course, subject to the approval of the dean of the degree college in which the student enrolls. This shift from a terminal program to a degree program may involve spending additional time in completing the degree requirements for two main reasons: (1) some of these requirements are normally completed in the first two years and may not have been a part of the associate in arts program, and (2) some of the technical courses included in a specific terminal program may not be transferable to a four-year degree program.

Associate in Arts Degree in Mental Health Technology

The University College in cooperation with the Athens Mental Health Center offers the associate in arts degree in mental health technology. Students requesting admission to the program must be accepted by the University College and an evaluation committee composed of professional mental health workers. This would normally occur

after completion of MNH 101. A minimum of 90 hours is required (with a 2.0 average at graduation), to be completed in no fewer than six (6) regular quarters.

Mental Health Technology Curriculum

- | | Hours |
|--|-------|
| 1. General Education Courses | |
| Electives to be selected from courses in the social sciences, e.g. Govt 101, Soc 310, 320, SW 390. | 25 |
| It is highly recommended, although not required, that these general education courses include at least one course in each of the following three areas: English, interpersonal communication and physical education. | |
| 2. Career Courses (Required) | |
| Supportive social science courses recommended in the following sequence. Mental health technical courses required in the following sequence. | |

FIRST YEAR

Quarter I

	Hours
Bot 101 or Zool 101 Principles	5
Psy 101 General Psychology	5
MNH* 101** Introduction to Mental Health	3

Quarter II

Soc 101 Introduction to Sociology	5
Psy 103 Applications of Psychology	4
Psy 331 Psychology of Adjustment	4

Quarter III

MNH 122 Introduction to Case Management	3
Psy 373 Child and Adolescent Psychology	5

SECOND YEAR

Quarter I

	Hours
MNH 201 Activity Therapies	3
EdGS 410 Human Relations	3

Quarter II

MNH 221 Practicum in Mental Health I	5
Social Work 391 Social Welfare I	4
EdGS 440 Foundations in Group Dynamics	4

Quarter III

MNH 222 Practicum in Mental Health II	5
MNH 231 Seminar in Mental Health	3
SW 392 Social Welfare II	4
Total	90

*Mental health courses taught by the professional staff at the Athens Mental Health Center.

**MNH 101 will be offered both fall and winter quarters to permit students to start the program at either time.

Associate in Science Degree in Nursing

Both the Zanesville and Portsmouth campuses of Ohio University offer two-year nursing programs. Students who complete the program will receive an associate in science degree in nursing and will be eligible to write the State Board Examination for Registered Nurse.

FIRST YEAR

Quarter I

	Class	Lab	Cr
Chem 121	3	3	5
Zool 101	3	2	5
Nurs 101	3	4	5
			15

Quarter II

	Class	Lab	Cr
Chem 123	3	3	4
Zool 300	4	4	6
InCo 101	3		3
Nurs 102	3	4	5
			18

Quarter III

	Class	Lab	Cr
Zool 310	2	4	4
Zool 345	4		4
Psy 101	5		5
Nurs 103	3	6	5
			18

SECOND YEAR

Quarter IV

	Class	Lab	Cr
Psy 373	5		5
Nurs 201	3	6	6
Nurs 202	3	6	6
			17

Quarter V

	Class	Lab	Cr
Nurs 203	3	6	6
Nurs 204	3	6	6
Soc 101	5		5
			17

Quarter VI

	Class	Lab	Cr
Nurs 205	3	12	9
Nurs 206	3		3
Elective	5		5
			17

In addition, the Belmont County campus and the Ohio Valley Hospital School of Nursing, Steubenville, have a cooperative nursing program. The Belmont County

campus provides the academic credit courses at the hospital that are required for the certificate program.

Associate in Arts Degree in Radio-Television

Ohio University-Zanesville offers a two-year program leading to an associate in arts degree in either radio-television technology or radio-television performance-production. The associate degree in radio-television prepares the student for employment as a technician, or for positions in the production-performance areas of broadcasting. The two-year program in radio-television technology prepares the student to take the examination for a First Class FCC engineering license. The entire program is coordinated with learning experiences at radio-television stations WHIZ-AM-FM-TV in Zanesville, Ohio and better TV in Zanesville.

Program One (Technology)

Freshman

R-TV 106 ..4	R-TV 121 ..3	R-TV 311 ..4
Hist 101 ...4	R-TV 208 ..4	Hist 103 ...4
Math 263A* .5	Hist 102 ...4	Math 263C .5
or	Math 263B .5	or
Math 113 ...5	or	Math 140B .5
InCo 103 ...4	Math 140A .5	Elective4
	17	16

Sophomore

Eng 1875	R-TV 330 ..4	Govt 102 ...4
R-TV 316 ..4	Govt 101 ...4	Econ 102 ...4
Jour 351 ...3	Econ 101 ...4	R-TV 490 ..8
BIC 220 ...3	Psy 1015	R-TV 498 ..2
	15	17

Program Two (Performance-Production)

Freshman

R-TV 106 ..4	R-TV 121 ..3	R-TV 455 ..4
Hist 101 ...4	R-TV 208 ..4	R-TV 311 ..4
Econ 101 ...4	Hist 102 ...4	Hist 103 ...4
InCo 103 ...4	Econ 102 ...4	Psy 101 ...5
	16	Elective ...3
		18

*Math 113 must be substituted if you do not have the prerequisite for Math 263A. Math requirements satisfied by taking Math 140A in winter quarter and 140B in spring quarter.

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Sophomore

R-TV 316 . . .4	R-TV 330 . . .4	R-TV 452 . . .3
Jour 351 . . .3	Govt 102 . . .4	R-TV 457 . . .4
Govt 101 . . .4	Jour 353 . . .2	R-TV 413 . . .4
BIC 2203	R-TV 490 . . .5	or
Elective3	R-TV 498 . . .1	R-TV 417 . . .4
<u>17</u>	<u>16</u>	Eng 187 . . .5
		<u>16</u>

Electives: CA 117-118-119 (3); ThAr 115A-115B-115C (2).

Associate Degree for Library Technical Assistants

Ohio University-Lancaster offers a two-year program for library technical assistants leading to an associate in applied science. This program prepares the student for employment as supportive staff in libraries between the professional librarian and the library clerk. Career opportunities may be available in elementary and secondary school libraries, public and academic libraries, business and industry or government agencies.

FIRST YEAR

Quarter I

LTA 101 Intro to Library Technology	Hours 4
Psy 101 General Psychology	5
InCo 101 Fundamentals of Speech	3
Elective Social or Natural Science	3-5
	<u>15-17</u>

Quarter II

LTA 102 Support Operation for Public Services I	4
Eng 178 Literary Themes	5
Elective Social or Natural Science	3
Elective	3-5
	<u>15-17</u>

Quarter III

LTA 103 Support Operation for Public Services II	4
LTA 104 Support Operation for Technical Serv. I	3
Soc 101 Introduction to Sociology	5
Elective Social or Natural Science	3-5
	<u>15-17</u>

SECOND YEAR

Quarter I

LTA 201 Library Services for Specific Groups I	Hours 4
LTA 204 Support Operation for Technical Serv. II	5
LTA 206 Audio-Visual Methods and Materials	4
CA 117 Comparative Arts	3
	<u>16</u>

Quarter II

LTA 203 Library Technician Internship I	3
LTA 202 Library Services for Specific Groups II	4
LTA 207 Preparation of Audio-Visual Materials	3
BIC 220 Business and Industrial Communications I	3
Elective	3
	<u>16</u>

Quarter III

LTA 205 Library Technician Internship II	8
Eng 201/202 Interpretation of Fiction/Poetry	5
Mgt 300 Management	4
	<u>17</u>
TOTAL	<u>94</u>

RESERVE OFFICERS TRAINING CORPS

The rationale for reserve officer training stems from a statement by the founding fathers of this nation that we must "provide for the common defense." For young men who have the desire and talent to dedicate their time to the service of their country there are many and varied rewards. Today, when science and technology are so much a part of the national defense, and the defense of this nation is so inextricably involved with world problems, our nation needs talented and well-trained officers in its military services. These services need the best administrators, engineers and scientists the nation's schools can produce: officers in command with wide ranges of knowledge and skill. The Reserve Officers Training Corps, in agreement with universities and colleges, is designed to produce these types of men for the nation.

There are two ROTC departments at Ohio University: The Department of Aerospace Studies and the Department of Military Science.

ROTC is divided into two phases: the basic course and the advanced course. The University offers a four-year program and a two-year program for both departments.

BASIC COURSE REQUIREMENTS. In general, any physically qualified male student who is a U.S. citizen and is more than 14 years of age is eligible for enrollment in the basic course.

ADVANCED COURSE REQUIREMENTS. To be eligible for the advanced course a student must meet academic, physical, aptitude and moral selection criteria; complete either the basic course on campus or the six-week summer camp/field training, following the sophomore year and enlist in the Reserve of the respective service. Active duty commissions are not guaranteed upon successful completion of the program and students may be discharged from the Reserve for reasons of academic failure, personal hardship, medical disqualification or inaptitude.

SCHOLARSHIPS. Scholarships are available on a competitive basis for all qualified students participating in the four-year program. These scholarships pay costs of tuition, fees, books and laboratory expenses. In addition, recipients receive a subsistence allowance at the rate of \$50 per month for the period the scholarship is in effect.

SUBSISTENCE ALLOWANCE. All students in the advanced course receive subsistence allowances of \$50 per month.

SUMMER CAMP/FIELD TRAINING ALLOWANCES. All travel expenses, board, living quarters and uniforms are furnished and students are paid while attending summer camp/field training.

UNIFORMS AND EQUIPMENT. Textbooks, training equipment and complete uniforms are loaned to all ROTC students without cost. A student entering the advanced course receives, without cost, a complete officer-type uniform. The newly commissioned second lieutenant receives a \$300 clothing allowance upon entry on active duty.

COMMISSIONS. A student who successfully completes the ROTC advanced course and the requirements for a baccalaureate degree will be qualified for the tender of a commission as a second lieutenant in the United States Army or the United States Air Force.

Students who have successfully completed the first year of the ROTC advanced course and have shown evidence of outstanding leadership, scholarship and achievement in extracurricular activities are eligible for appointment as "Distinguished Military Students" (Army) and "Distinguished Cadets" (Air Force). Distinguished Military Students/Cadets may be considered for commissions in the Regular Army or Regular Air Force.

SPECIAL SCHOOLING. Both departments encourage graduate study and may permit a delay in call to active duty for up to four years for students enrolled in graduate-level study. Selected officers, after entrance on active duty, are sent to civilian universities or service technical institutes for graduate work leading to a master's degree or to the doctor of philosophy degree in a variety of specialized fields.

Department of Aerospace Studies

The aerospace studies program is designed to develop the attitudes and skills required of professional Air Force officers. Emphasis is on professional education. The basic goal is to provide to student cadets the background knowledge they will need to become junior officers in the United States Air Force.

The curriculum during the first two years of the basic "General Military Course" focuses on the existence and scope of world military power, ideological conflicts and present and future implications of both. Included within this framework are elements of national power, an overview of the Air Force, a study of democracy and the actions of nations in their search for world peace. Concurrently with these academic subjects, the student cadet will participate in leadership activities called "Corps Training." These will enable him to gain an insight into the dynamics of military leadership as well

as become familiar with the customs and courtesies of the military way of life. There is no service commitment during the first two years and it is an excellent way for a student to look at the Air Force as either a career or means of fulfilling his military obligation. This entire basic unit consists of six quarters of study and is entitled General Military Course or GMC.

The advanced curriculum, appropriately named the "Professional Officer Course" or POC, is specifically designed to prepare the student cadet for active duty as a commissioned officer. The course curriculum in the junior year includes studies of the development of air-power, present concepts within the Air Force and present and future astronautics and space operations based on projected technological developments. The senior year emphasizes professional responsibilities of Air Force officers within our democratic society and how the Air Force supports national goals. Studies are made of the military justice system, leadership and principles of management. Through classroom methods of case studies, guest lecturers and dialogue, the senior student cadet experiences a realistic simulation of problems facing the junior officers. The members of the advanced Professional Officer Course develop their leadership skills by working with the freshman and sophomore cadets; they improve their communicative abilities by writing and speaking, and they perform organizational projects similar to those accomplished by active duty Air Force officers. This advanced unit consist of six quarters of on-campus study and a summer quarter of field training which is a prerequisite of the course.

Interested and qualified cadets have the additional option of becoming flying officers. Identification for either pilot or navigator training will be made during the freshman (GMC) year, or for two-year applicants prior to the beginning of the advanced (POC) course. Cadets qualified in the pilot category will receive 36 hours of flight instruction in their senior year which may qualify them for a private pilot's license and entry into the USAF flying training programs after graduation and commissioning.

This on-campus instruction will be provided at no cost to the student cadet as part of the Air Force ROTC program. Navigator qualified cadets receive no formal flight instruction until after graduation and commissioning when they will enter the USAF's Navigation Flying Training Program.

After his commissioning, each new officer will be assigned to a position within the Air Force structure which best combines his academic major, his desires and the needs of the Air Force. Past graduates have requested and been assigned to areas of air operations (both flyers and nonflyers); administration, biological, medical, physical and social sciences; engineering; law, and research and development in aerospace technologies.

Department of Military Science

The military science program is designed to complement the participating student's civilian goal of acquiring a baccalaureate degree in a course of study of his choosing by enabling him to develop those attitudes and understandings that will facilitate transition into military service. The curriculum does not provide technical training in a job specialty nor does it emphasize vocational training; it complements and provides a base for normal progression in the commissioned officer educational program. The general objective of the Military Science Program is to procure and produce junior officers who, by their education, training, attitude and inherent qualities, are suitable for continued development as army officers. Every effort is made to commission graduates in the branch of the Army (area of specialization) of their choosing, and for which they are best suited by virtue of their academic major.

During the second year of the advanced course, interested and qualified cadets may enroll in the Army ROTC Flight Instruction Program. All expenses of this program are borne by the United States Army. In addition to enhancing the possibility for a career in army aviation, the cadet who successfully completes flight instruction also has the opportunity to earn his private pilot's license.

The College of Arts and Sciences

George R. Klare, *Dean*

Jesse H. Day, *Associate Dean*

Student Affairs:

William R. Jones, *Senior Assistant Dean*

James E. McMullen, Jr., *Assistant Dean*

Ohio University remained a liberal arts college for almost one hundred years after it was founded. With the expansion of curricula and organization of new colleges and divisions during the last 60 years, the College of Arts and Sciences has held to what has been the central purpose of the college for more than a century and a half: to provide opportunities for the student to secure a general, liberal education. Since its focus is on the more general concerns of man, it is broader than, but in many cases includes, an education for immediate application. A liberal education implies teaching intended to impart knowledge, critical-mindedness, clear expression and ideas important to the thinking of free men and women. A liberal education also affords an acquaintance with the language, skills and methods in some scholarly area at a level that is more than merely introductory. It prepares the student for advanced graduate or professional training and in some cases for a more immediate vocation. In step with the changing needs of our society, the college has maintained the central purpose of a liberal education while providing professional curricula and area studies based on research and geared to today's career opportunities.

These objectives are achieved through the courses which make up the curricula of the college—courses which historically have

been regarded as the means whereby man has come to understand himself and the world in which he lives. These courses have taken a place in our academic disciplines as the result of today's technological and scholarly advances. The student gets specialized knowledge in some particular field through degree requirements, and also gets a fundamental education in the humanities, social sciences and natural sciences. In line with these goals, the following pages illustrate that the AB and BS degrees require specific courses only in the major. Beyond this, the degree requirements are designed to permit the student to familiarize himself with the languages, humanities, social sciences and natural sciences as separate areas but with considerable freedom within the areas.

Departments

The College of Arts and Sciences includes the following 17 departments:

Botany

Chemistry

Classical Languages

Archaeology and Antiquities

Greek

Latin

English Language and Literature

Geography

Arts and Sciences

Geology
Government
History
Linguistics
 English as a Foreign Language
Mathematics and Astronomy
 Computer Science
Modern Languages
 French
 German
 Italian
 Portuguese
 Russian
 Spanish
Philosophy
Physics
Psychology
Social Work
Sociology and Anthropology
Zoology and Microbiology
 Medical Technology
 Microbiology
 Physical Therapy
 Preprofessional Areas in Zoology

Since a student enrolled in any college at Ohio University may elect courses in any other college with considerable freedom, much of the course work required by the other colleges is offered by the faculty of the College of Arts and Sciences. A student pursuing a degree in this college may elect courses, and in some instances may complete a major, in departments of the other degree-granting colleges.

A student entering the College of Arts and Sciences is assigned an adviser who teaches in the area of the student's major. Faculty advisers will assist in the preparation of a schedule each quarter so that proper sequences of courses in the major and appropriate related courses are selected. **HOWEVER, THE STUDENT IS RESPONSIBLE FOR SEEING THAT ALL REQUIREMENTS FOR THE DEGREE ARE BEING MET.**

Degrees and Majors

The college offers two degrees — the bachelor of arts (AB) and the bachelor of science (BS).

A major for the AB degree may be completed in the following areas:

Botany
Chemistry

Classical Languages (Latin)
Economics
English Language and Literature
Geography
Geology
Government
History
Mathematics
Modern Language
Philosophy
Physics
Psychology
Social Work
Sociology and Anthropology
Zoology

Arts and Sciences students may complete the following non-Arts and Sciences majors earning an AB degree:

Art
Communication
Home Economics
Journalism
Music
Theater

A major for the BS degree may be completed in the following areas:

Botany
Chemistry
Geography
Geology
Mathematics
Physics
Zoology

Arts and Sciences students may complete a BS degree in the following non-Arts and Sciences major:

Home Economics

REQUIREMENTS FOR BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES

Regardless of the major he is completing, the Arts and Sciences degree student follows a basically consistent outline to determine the requirements for his particular program. The AB and BS degree programs differ only in the language requirement (see language requirement section below) and in the specific major requirements as designated by the individual departments (see

major requirement section below). The AB and BS degree requirements are explained under the following categories:

1. The Major Requirement
2. The Freshman Level English Requirement
3. The Foreign Language Requirement
4. The Humanities Area Requirement
5. The Social Sciences Area Requirement
6. The Natural Sciences Area Requirement
7. The Level of Study Requirement (Hours Above 200)
8. Total Hours Required and Credit Allowed
9. The Single Application of Credit
10. Averages Required
11. General Degree Information
 - a. Advising
 - b. *Degree in Absentia*
 - c. Dual Major
 - d. Minor Requirement
 - e. Second Bachelor's Degree
 - f. Teacher Certification
 - g. Time and Resident Load Limitations
 - h. Transfer and Transient Study

1. The Major Requirement

The specific requirements for each major in the departments in the College of Arts and Sciences are indicated in the course descriptions section of this bulletin. Special curricular requirements for the preprofessional areas (preparation for medicine, preparation for law, etc.) are explained in the Special Curricula section which follows. Requirements for a major in the departments outside the college are determined by a special adviser in each department.

The college requires that each major consist of a minimum of 36 quarter hours to be completed in one area. This includes nine quarter hours which must be taken at the junior-senior level. Specific departmental requirements must also be met. It should be noted that specific departments generally require more extensive course work for the major than these minimal requirements.

Methods courses are not included in the major. The AB degree candidate can count a maximum of 60 hours in one subject toward his degree; the BS degree candidate may count a maximum of 68 hours.

2. The Freshman Level English Requirement

This requirement is established by the individual department and varies with the major.

The courses may be selected from Eng 177, 178, 179, 187, 188, 189, all of which are five-credit-hour courses. The student should select the 170 or 180 series as directed. Where the department makes no distinction, either series may be elected. These courses will apply to the humanities area requirement regardless of major.

Major	Hours of Freshman English Required
Art	5
Botany	10
Chemistry	10
Classical Languages (Latin)	5
Communication	10
Economics	10
English	5
Geography	5
Geology	5
Government	10
History (170 series)	10
Home Economics	5
Journalism	10
Mathematics	0
Modern Languages	5
Music	10
Philosophy	10
Physics	5
Psychology	10
Social Work	5
Sociology	5
Theater	5
Zoology	10

3. The Foreign Language Requirement

CANDIDATES FOR THE AB DEGREE

The AB degree foreign language requirement is a complete sequence through 213 or 241 in one modern language, or through 203 in one classical language.

Two years of high school language are equivalent to one year of college language. The student who has completed two or three years of one language in high school and who wishes to complete the requirement in that language may do so according to the instructions in the tables at the end of this section. In the case of Latin, a student with at least two years of high school Latin may also fulfill the requirement by passing Gr 101-102-103 or Lat 201-202-203.

A student who has completed four years of one modern foreign language in high school may complete the foreign language requirement according to the instructions in the table. A student with four years of high school Latin may fulfill the requirement by passing any two quarters of Lat 351, 352, 353.

CANDIDATES FOR THE BS DEGREE

The BS degree candidate may meet the foreign language requirement with proficiency in foreign language(s) equivalent to two years of college study. To determine his individual requirement, he should bear in mind that two years of high school study in a single language is considered equivalent to one year of that language at the college level. Therefore, the student who enters college with two years of preparation in each of two languages or four years in a single language may consider his requirement for the BS degree already filled. The student who has had two high school years in only *one* language may complete his requirement by taking the college intermediate year (211, 212 and 213 if a modern language; 201, 202 and 203 if Greek or Latin) in the same language or by taking the beginning year (111, 112 and 113 in modern language, or 101, 102 and 103 if Greek or Latin) in a *second* language. Credit is not given toward meeting the foreign language requirement for the first and

second quarters of a beginning or intermediate year unless the third quarter is also completed.

FOREIGN STUDENTS

Upon entering Ohio University, a foreign student whose native language is not English may satisfy the foreign language requirement by demonstrating competence in English. This must be approved by the chairman of the Linguistics Department and generally requires the completion of one course in English as a foreign language. The student may also satisfy the foreign language requirements by taking a foreign language other than his own.

TABLE I

All students will begin their college work in modern languages according to the following table:

Years of modern language in high school:	Begin college modern language for credit at:
0-1 year	Course 111.
2-3 years	Course 211. The student presenting two or more years of high school language receives no credit toward graduation for courses 111, 112 or 113. An exceptionally well-prepared student may, by permission, begin with 241.
4-5 years	Course 213 or 241. Degree credit cannot be earned for both 213 (non-major course) and 241 (major course). The student presenting four or more years of high school language receives no credit toward graduation for 111, 112, 113, 211 or 212.

The student may also use language courses taught in the Department of Linguistics (Hausa, Chinese, Malay/Indonesian

and Swahili) to complete the language requirement in accordance with the guidelines above by substituting the numbers 372, 373, 374 (beginning year) and 375, 376 and 377 (intermediate year) for the numbers 111, 112, 113, 211, 212 and 213.

TABLE II

The student will begin his college work in Latin according to the following table:

Years of Latin in high school:	Begin college Latin for credit at:
0-1 year	Course 101.
2-3 years	Course 201. The student presenting two or more years of high school Latin receives no credit for courses 101, 102 and 103. An exceptionally well-prepared student may, by permission, begin with 351.
4-5 years	Course 351. The student presenting four years of high school Latin receives no credit toward graduation for 101, 102, 103, 201, 202, 203.

4. The Humanities Area Requirement

The humanities requirement may be met by a selection of 18 quarter hours from two or more areas, with at least nine hours in one of the areas, from among the following:

- a. archaeology
- b. art history *except* 334, 335, 336A, B,C, and 337, 338, 339, History of Photography
- c. comparative arts *except* 334, 335, 336A,B,C
- d. English courses
- e. foreign language courses other than those necessary to complete the foreign language requirement
- f. Gr 127
- g. Hum 335, 336, 337, 338 and 339 — Foreign Literatures in Translation

- h. Hum 107, 108, 109 or 307, 308, 309 —Great Books
- i. philosophy
- j. Mus 120
- k. Dance 351, 352, 353, Dance Cultures of the World, and Dance 471, 472, 473, History of Dance.

5. The Social Sciences Area Requirement

The social science requirement may be met by a selection of 18 quarter hours from two or more areas, with at least nine hours in one area, from among the following:

- a. economics
- b. geography *except* 101, 201, 211, 301, 312
- c. government
- d. history
- e. psychology *except* 321, 326, 412, 414
- f. sociology and anthropology
- g. social work

6. The Natural Sciences Area Requirement

The natural science requirement may be met by a selection of 18 quarter hours from two or more areas, with at least nine hours in one area, from among the following:

Biological Sciences:

- a. botany
- b. Psy 326, 412, 414
- c. zoology

Physical Sciences:

- a. astronomy
- b. chemistry
- c. Geog 101, 201, 211, 301, 312
- d. geology
- e. mathematics *except* 11, 32, 120, 320 and 420
- f. PSc 101, 102, 103, or H197, H198, H199
- g. physics
- h. Psy 321

Note: Methods courses do not apply to the area requirements.

7. The Level of Study Requirement (Hours Above 200)

Within the total hours applied to the degree, at least 90 quarter hours of Arts and Sciences (liberal arts) courses must be above the freshman level; that is, they must be numbered 200 or above. Arts and Sciences courses are defined as those courses listed under humanities, social sciences and natural sciences (#'s 4, 5 and 6) above.

Non-Arts and Sciences courses which satisfy any of the area requirements (#'s 4, 5 and 6 in the outline above) also count toward the 200-level requirement.

Education courses which are required for teacher certification may be applied toward the 200-level requirement only when the student has met all the requirements for teacher certification. These courses count also for the psychology major who plans to enter the graduate program in school psychology, upon written recommendation of the chairman of the Psychology Department certifying individual need and eligibility.

Economics majors may apply to the 200-level requirement a maximum of 15 hours from: Fin 323, Money, Banking and Economic Activity; QM 354, 355, 356, Business Statistics; 441, Multivariate Analysis, and any advanced offering in statistics.

All non-Arts and Sciences courses required by the programs listed under the Special Curricula section which follows will apply to the 200-level requirement for those students who *complete* the given program.

All other non-Arts and Sciences courses are considered to be electives. These are not counted toward the 200-level requirement, but are counted toward graduation.

8. Total Hours Required And Credit Allowed

A minimum total of 180 quarter hours for credit is required for either degree. Only the final hours earned when courses are repeated count for graduation.

Non-credit courses (courses numbered below 100) and credits earned through repetition of high school language (see table in

#3 above) are not accepted toward the 180 hour requirement.

A maximum of 12 quarter hours in applied music, six quarter hours in physical education activities and nine quarter hours in industrial technology are accepted toward the 180 hour requirement.

No more than 60 hours in any one subject may be counted toward the AB degree; and no more than 68 hours in one subject may be counted toward the BS degree. See the *Guidelines and General Information* section of this catalog for a description of the residence requirement, which can, for some students, increase the total number of hours required.

9. The Single Application of Credit

No course may satisfy more than one of the area requirements in foreign language, humanities, social sciences, natural sciences or the major requirement. For example, a philosophy major may not apply any courses in philosophy toward the humanities requirement. (Courses required for a major but outside the major department will be counted toward the area requirements.) However, the student majoring in a foreign language may apply courses at the beginning and intermediate level of that language toward the language requirement since the language major is defined as including only those courses above the intermediate level. For teacher certification students, certain courses in the "comprehensive major" may fulfill requirements for the appropriate area; students will need to consult with their advisers on this point. Freshman level English applies to the humanities area requirement.

10. Averages Required

In order to receive a degree in the College of Arts and Sciences, a student must have a minimum point-hour ratio of 2.0 on all of the following:

1. All hours attempted at the college level
2. All hours attempted at the college level in the major

3. All hours attempted at Ohio University
4. All hours attempted at Ohio University in the major

Only the final hours and points in repeated courses are counted for graduation. However, all courses including failures are included on the student's transcript. For repeated courses see the *Guidelines and General Information* section of this catalog.

The graduation point-hour ratio is computed after deductions for duplicated courses have been made. Note also that courses taken at Ohio University and repeated at another school do not result in deduction of the first grade earned.

11. General Degree Information

a. Advising

The college prepares, on a quarterly basis, current degree information for each student in the form of graduation check sheets and lists of currently enrolled students grouped according to their declared major. At advising and preregistration time each quarter, the student receives a copy of his check sheet and copies are given to the advisers, whose names are posted on the major lists in the departmental offices. The student consults the list to identify his adviser, and should meet with his adviser not only during preregistration, but regularly throughout the year when assistance concerning academic requirements and plans is needed.

It is hoped that the student will develop a close relationship with his adviser concerning his academic program. Any arrangements deviating from the major requirements as described in the course description section of this catalog must be communicated to the office of the dean in writing by the department chairman. Such action should have the initial approval of the adviser. The student should visit the office of the dean only when exceptional circumstances exist, upon referral by his adviser or to correct check sheet errors and change programs.

To change his major, the student must visit the office of the dean. A change of major is not accomplished by making the change on the registration form.

When the student changes his major, his adviser is changed automatically by the

college. All other matters pertaining to the assignment of advisers are administered by the departmental offices.

b. Degree in *Absentia*

Students who wish to earn a degree *in absentia* must complete 135 quarter hours as well as the specific requirements for the chosen program at Ohio University. A point-hour ratio of 2.0 or better must be maintained on all work attempted, and on all work in the major. All college area requirements must be completed, except the 200-level requirement, of which at least 45 hours must be completed above 200. A full year's work in an accredited school of dentistry, forestry, law, medical technology, medicine, physical therapy or veterinary medicine must be completed, and the student must be advanced to the second year of training (when the program is for more than one year) at the professional school without condition. For the medical technology and physical therapy degree *in absentia*, the student must successfully complete the professional program and, for medical technology, the registry examination.

A statement must be secured from the dean of the college before entering the professional school granting the degree *in absentia* privilege.

c. Dual Major

Students wishing to earn a dual major in two related fields must consult with the chairman of each department involved and the dean of the college. Most departments stipulate that the student must complete the requirements for the full major in both areas even though he is pursuing a dual major. Courses taken in either or both of the fields, even though not required for the major, cannot be used to complete the general area requirements in foreign language, humanities, social sciences or natural sciences. The College of Arts and Sciences requires a minimum of 23 quarter hours (including nine hours at the 400-level or above) beyond the introductory course in each field. Specific requirements are left to the discretion of the departments concerned.

d. Minor Requirement

There is no formal minor requirement for the college.

e. Second Bachelor's Degree

The AB or BS degree is granted only once to a given student. The student may, however, complete additional majors within his degree program, or he may earn both the AB and BS degrees or degrees from separate degree-granting colleges. For the guidelines for earning a second bachelor's degree, see the *Guidelines and General Information* section of this catalog.

f. Teacher Certification

Students earning either a bachelor of arts or bachelor of science degree in the College of Arts and Sciences may meet the special requirements for certification to teach in the secondary schools in Ohio by completing the following:

1. The regular program for the AB or BS degree with a teacher education major.
2.
 - a. Psy 375 5
 - b. EdSe* 250 4
 - c. EdPl** 360 or 361 2
 - d. EdSe 351 5
 - e. EdSe 480 3
 - f. The methods course offered by the department of the student's major 3-5
 - g. EdPl 463-464 12
 - h. EdPl 465 3
3. The teaching major — The teaching major program consists of the student's standard major plus selected related courses. The student can obtain a description of this program from his adviser, the Office of the Dean of the College of Arts and Sciences, or from the College of Education.

*EdSe—Secondary Education
 **EdPl—Professional Laboratory

All students must meet the following general education requirements for certification in Ohio, as set forth by the State Department of Education:

Physical Education — 3

Students must complete a total of 45 quarter hours of general education. These 45 quarter hours must be distributed so as to include at least two courses in each of the following fields:

1. Science AND Mathematics (one course in each)
2. Comparative Arts and/or Philosophy

3. Social Science
 Psy 101 is required
4. English, and/or foreign language
 InCo 103 is required unless waived on the basis of a high school speech course

If the major subject is the same as one of the above fields, then 10 quarter hours of the major may be counted towards the corresponding general education field as well as the major.

Careful selection of courses in meeting the College of Arts and Sciences area requirements will enable the student to fulfill all of the above general education requirements without exceeding the hours required for any requirements in the College of Arts and Sciences.

A prerequisite to certification is the satisfactory fulfillment of the Program of Selective Admission and Retention in Teacher Education. This program includes the following:

- A. Admission to teacher education: Application is made in the Personnel Services in Education Office, McCracken Hall, during the quarter when advancement from University College is expected.
- B. Admission to junior standing in teacher education: Application is made in the Personnel Services in Education Office, McCracken Hall, during the third quarter, sophomore year.
- C. Admission to student teaching: Application is made in the Office of Student Teaching, McCracken Hall, before Christmas vacation of the year prior to the year when the student teaching is to be done. (For the details of the Selective Admission and Retention Program, see the College of Education section in this catalog.)

All facets of this program became effective with the 1971-72 freshman class.

g. Time and Resident Load Limitations

The student's requirements are defined by the catalog in effect when he begins his study in a given program (when he first registers at Ohio University or changes to a new major program). Upon the expiration of five years past the date of entry, the requirements become defined by the current catalog. (See the *Guidelines and General Information* section of this catalog.)

The normal resident load requirement for a student enrolled in the college is as described in the *Guidelines and General Information* section of this catalog. Note also that courses audited or taken by correspondence are not included in the minimum required hours.

Students who have requirements which involve courses numbered below 300 should start meeting such requirements not later than the beginning of the sophomore year. This is strongly recommended in the case of foreign language. Registration by juniors or seniors in courses numbered below 300 is discouraged and in some cases prohibited.

h. Transfer and Transient Study

A transfer student is required to complete at least 12 quarter hours toward the major in courses in the major department at the 200 level or above at Ohio University, with a point-hour ratio of at least 2.0. These courses should be approved by the department chairman. A transfer student completing the dual major is required to complete at least nine quarter hours at the 200 level or above in each of the two departments at Ohio University, with a point-hour ratio of at least 2.0 in each department. These courses should be approved by the chairmen of the two departments. Transfer students must complete freshman level English as required by the major department.

The transfer student or student earning credit by transient study should keep in mind that, in order to receive his degree, he must have a 2.0 or better average on all work done at Ohio University and on all work done in the major at Ohio University (see #10 above).

The transfer student should note the residence requirement which stipulates that a minimum of 45 final hours (one full year) be completed with residence credit.

The senior student wishing to earn credit by transient study should keep in mind that he must complete his final 15 hours in residence at Ohio University if he previously has earned 90 or more hours in residence. If he has earned fewer than 90 hours in this manner, his final residence requirement is 45 hours.

The student wishing to arrange to earn credit by transient study must secure approval of his dean prior to registering for such study. This permits review and clarification of requirements and procedures and prevents loss of credit.

THE STUDENT IS ENCOURAGED TO READ THE *GUIDELINES AND GENERAL INFORMATION* SECTION OF THIS CATALOG FOR GENERAL UNIVERSITY ACADEMIC INFORMATION, INCLUDING INFORMATION CONCERNING THE GRADING SYSTEM, PROBATION, CREDIT HOUR LOADS AND RESIDENCE REQUIREMENTS.

SPECIAL CURRICULA

Preparation for Dentistry

No specific area for the major is required by the dental college or by Ohio University in undergraduate preparation for dentistry. The student must present preparation in various basic sciences, and many students do complete a major in one science or a dual major in two sciences.

The minimum requirement for admission to dental school is the completion of at least 90 quarter hours of academic credit, exclusive of physical education and military science, which must include general chemistry, qualitative analysis; organic chemistry, including laboratory; physics; zoology, including comparative vertebrate anatomy; and English. A broad training in courses other than natural science is urged. A student who wishes to attend a particular dental school should plan his program to meet the entrance requirements of that school. Pre dental students have the degree *in absentia* privileges.

All dental school applicants are required to take the Dental Aptitude Test, offered during the academic year previous to the time the student plans to enroll in dentistry.

The following sequence of courses is recommended for pre dentistry students majoring in zoology.

Freshman

Bot 102 Plant Biol*	5
Chem 121 Introduction	5
Chem 142 Chemical Energetics	5
Chem 143 Quantitative Analysis	5
Math 263A Anal Geometry and Calculus	5
Zool 101 and 203 Prin of Biol and Zool	11
Arts and Sciences College degree requirements and/or electives. (English and comparative arts are recommended.)	

Arts and Sciences

Sophomore

Chem 301-302 Organic (short)	6
Chem 303-304 Organic Lab	3
or	
Chem 305-306-307 Organic (long)	9
Chem 308-309 Organic Lab	4
Zool 303 Comp Vert Anatomy	6
Zool 325 General Genetics	5
Arts and Sciences College degree requirement and/or electives.	

Junior

Micr 411 General Microbiology*	6
Phys 201-202-203 Introduction	12
Zool 404 Comparative Vertebrate Anatomy, Mammalian*	6
Zool 448 Cell Physiology	4
or	
Zool 460 Animal Physiology	6
Arts and Sciences College degree requirements and/or electives.	

*Suggested

Preparation in Engineering Physics

This curriculum offers the student a wide variety of opportunities, particularly in industrial and governmental laboratories looking for engineering-oriented scientists who have a broad basic education in fundamental technical training.

Freshman

EG 101	3	EG 102	3	Math 263C ..	5
Math 263A ..	5	Math 263B ..	5	Phys 252 ..	5
Eng Comp**	5	Phys 251 ..	5	InCo 101 ..	3
Requirements and/or electives (foreign language, as required)*					

Sophomore

Chem 121 ..	5	Chem 122 ..	4	Chem 123 ..	4
Phys 253 ..	5	Math 340 ..	5	Phys 306 ..	2
Requirements and/or electives* (foreign language, as required)*					

Junior

Phys 311	...4	Phys 312	...4	Phys 316	...3
Phys 321	...4	Phys 322	...4	Phys 441	...3
ChE 3314				
Requirements and/or electives* (foreign language, as required)*					

Senior

EE 212 or	EE 314 or	Requirements
313	340	and/or
Phys 451 ..	Phys 452 ..	electives*
Phys 411 ..	ME 30115-17
Requirements and/or electives* (foreign language, if required)*		

* See requirements for the BS degree.

** The student may fulfill the freshman level English requirement by selecting one course (5 hours) from 177, 178, 179, 187, 188 and 189 or the student placed in honors English should select one course (5 hours) from 197, 198 and 199.

Preparation for Forestry

The Department of Botany, Ohio University has a cooperative arrangement with the School of Forestry of Duke University for the program described below; this type of program may possibly be extended to other schools of forestry.

The curriculum outlined will prepare a student for admission to the School of Forestry of Duke University at the completion of the junior year. This will permit the student to receive the bachelor of science degree *in absentia* from Ohio University at the conclusion of one academic year at Duke, and the master's degree from Duke University upon completion of an additional one and one half years of academic work in the program.

Freshman

Botany (General, Plant and Animal Biology) ..	15
Chem 121, 142, 143 Fundamentals	15
Math 263A, 263B	10

Sophomore

Bot 307, 308 Morphology	12
Bot 309 Taxonomy of Flowering Plants	5
Econ 101, 102	8
Chem 301, 302, 303, 304	9
Zool 325 Genetics	5
Electives*	

Junior

Bot 424 Physiology	5
Bot 426 Ecology	5
Bot 431 Cytology	5
Phys 201, 202, 203 Introduction	12
CS 201	5
Electives*	

* Electives to fulfill Arts and Sciences degree requirements for the degree *in absentia*.

Preparation for Government Foreign Service

Students desiring to prepare for the foreign service officer examinations, which are given yearly, are advised to acquire as broad an education as possible. Facility in written and spoken English, competency in

a foreign language and a good background in economics, history, government, business or public administration are essential. More detailed information concerning foreign service officer examinations, including sample questions from previous examinations, may be obtained from the Government Department.

Preparation for Law

A student in the College of Arts and Sciences who plans to enter law school normally completes the specific requirements for the bachelor of arts degree. No special curriculum is prescribed. The prelaw student may complete a major in the area of his principal interest. He is advised to select courses from as many of the following as possible: English composition and literature and American literature; history, with a preference for English and American; government; economics; sociology; a laboratory science; mathematics; philosophy; ethics; logic; accounting; psychology, and a foreign language. Courses in speech and training in expression, as well as activities that develop the capacity for independent thought and action, are recommended.

The Ohio Supreme Court has ruled that a student entering law school must be able to show that he possesses an undergraduate degree from an approved college if he wishes to take the Ohio Bar Examination. Law schools in the state of Ohio require the degree of all entering students regardless of the state in which they plan to take the bar examination.

The degree *in absentia* privilege is available to students who do not plan to seek admission to an Ohio law school. Students who have completed 135 quarter hours at Ohio University with a point-hour ratio of 2.0 or above, on all hours attempted, and have satisfied the requirements for the AB or BS degree may obtain the degree after completing a full year's work of the quality prescribed for the bachelor's degree at Ohio University in an accredited school of law, including advancement, without condition, to the second year of law school. Prior to entering the school of law, the student must secure a statement in writing from the dean giving the *in absentia* privilege.

Preparation in Linguistics

The undergraduate student may prepare for graduate work in linguistics in any of several ways. He may apply for admission into the Bachelor of General Studies Program (see entry in the *Special Programs* section of this catalog). If accepted, he may work toward the BGS degree following a program planned to give him the strongest preparation for graduate study in linguistics that the resources of the University allow. Or, he may work within one of the departments permitting programs that are linguistically oriented. See, for example, the programs of the English, modern language and hearing and speech sciences departments. Depending upon the kind of linguistics the student wishes to study, he may want to consider an undergraduate major in mathematics, psychology or philosophy. Students interested in anthropological linguistics may want to consider the various course offerings in anthropology and those associated with the Center for International Studies programs: courses in African languages and particular aspects of African culture, or courses in Southeast Asian languages and cultures. (See the entry, *Center for International Studies*, in *Special Programs* section of this catalog.)

Inquiries concerning the problem of planning undergraduate programs with emphasis upon linguistics may be directed to the chairman of the Department of Linguistics, College of Arts and Sciences.

Preparation for Medical Technology

Preparation in medical technology trains students in laboratory methods used in hospitals, public health bureaus and other laboratories concerned with medical diagnosis and investigation.

Technologists who wish to be recognized by the American Society of Clinical Pathologists and entitled to use the initials, M.T. (A.S.C.P.) must have had a minimum of 135 quarter hours of work in a college or university recognized by the regional accrediting association, and a year's training in an approved school of medical technology.

The Ohio University-Mount Carmel Hospital Affiliated Training for Medical

Technologists fulfills these requirements and affords the student an opportunity to earn the bachelor's degree *in absentia*. After completing (1) a minimum of 135 quarter hours with at least a 2.0 point hour ratio in his major and in all hours attempted and (2) all area requirements for the baccalaureate the student registers through the Department of Zoology for 12 months of residency at Mount Carmel Hospital, Columbus, Ohio. Upon satisfactory completion of the University and hospital training requirements the student will receive the BS degree from Ohio University and is eligible to take the qualifying examination for the professional designation of Medical Technologist; this examination is administered by the Board of Registry of the American Society of Clinical Pathologists.

Approval may occasionally be granted for completion of the hospital training at hospitals other than Mount Carmel if such hospitals have A.M.A. and A.S.C.P. approved programs in medical technology and if, for reasons of location or other factors, this would better meet the needs of the student. Students desiring such approval are required to present a copy of the hospital's program of study to the Department of Zoology for its evaluation. If his substitute program is approved, the student becomes eligible for the degree *in absentia* privilege but must pass the A.S.C.P. registry examination before the degree will be granted.

Fourth year medical technology students who attend Mount Carmel Hospital and who require financial assistance may make application for a W. K. Kellogg Foundation or other loan through the Student Financial Aids Office. Expenses to be met during the year in Columbus are room rent and laboratory uniforms. No fees are charged by Mount Carmel Hospital, nor does it provide remuneration, except that it furnishes board.

Freshman

Chem 121 Introduction	5
Chem 142 Chemical Energetics	5
Chem 143 Quantitative Analysis	5
Math 113 Algebra	5
Math 263A Analytic Geometry and Calculus* ..	5
Zool 101-203 Prin Biol and Zool	11
University and Arts and Sciences College degree requirements and/or electives.	

Sophomore

Chem 301-302 Organic (short)	6
Chem 325 Instr. Methods of Analysis	5
Zool 300 Elements of Anatomy and Histology	6
Zool 325 General Genetics	5
Zool 345 Human Physiology	4
Arts and Sciences College degree requirements and/or electives.	

Junior

Micr 411 General Microbiology	6
Micr 413 Pathogenic Bacteriology	6
Micr 415 Immunology	7
and/or	
Zool 441 Parasitology	6
Zool 463 Physiological Chemistry	4
Zool 464 Physiological Chemistry Lab	4
Arts and Sciences College degree requirements and/or electives.	

Senior**

MedT 491 Urinalysis	3
MedT 492 Hematology	12
MedT 493 Bacteriology, Serology and Parasitology	15
MedT 494 Chemistry	15
MedT 495 Histological Technique	2
MedT 496 Basal Metabolism and Radioisotopes ..	1

* Not required but suggested

**The fourth year medical technology courses are taken at Mount Carmel Hospital.

Preparation for Medicine

Most medical colleges require the bachelor's degree for admission, and all others require a minimum of three academic years.

No specific area for the major is required by the medical college or by Ohio University in undergraduate preparation for medicine. The student must present preparation in various basic sciences, and many students do complete a major in one science or a dual major in two sciences.

For most medical schools, the requirements for admission include general chemistry; qualitative analysis; organic chemistry, including laboratory; physics; zoology, comparative vertebrate anatomy; embryology, and English. Courses in economics, fine arts, government, history, literature, composition, philosophy and sociology are advised. A year's course in mathematics is required by some and urged by most schools. A student who plans to complete only three years at Ohio University before entering medical college is urged to meet requirements of the

College of Arts and Sciences so as to be eligible for the degree *in absentia* privilege.

All medical college applicants are required to take the Medical College Admissions Test (MCAT) in May or October of the calendar year previous to the time they expect to enroll in medical college.

If the student has a particular medical school in which he wishes to enroll he should plan his program to meet the specific requirements of that school.

Premedical students majoring in chemistry will be held responsible for completing the following recommended premedical program.

CHEMISTRY MAJOR (AB DEGREE)

Freshman

Chem 121-142-143 (or H190-H191-143)	15 (or 13)
Math 263A-B-C	15
Zool 101-203 Prin Biol and Zool	11

Sophomore

Chem 305-306-307	9
Chem 308-309	4
Phys 251-252-253	15

Junior

Chem 453-454-455	9
Zool 303*	6
Zool 325*	5
Chem 325 (or Chem 484* and 485*)	5 (or 10)

Senior

Chem 476	4
Chem 490 and 491*	6
Zool 406*	6

*Desirable but not required.

Students wishing to complete a major in zoology while also meeting medical college admission requirements would be held responsible for completing the following recommended premedical program.

ZOOLOGY MAJOR

Freshman

Bot 102 Plant Biol*	5
Chem 121 Introduction	5
Chem 142 Chemical Energetics	5
Chem 143 Quantitative Analysis	5
Gr 127 Greek Words in English	3
Math 263A-B* Anal Geom and Calc	10

Zool 101-203 Prin Biol and Zool	11
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University and Arts and Sciences College degree requirements and/or electives. (Courses in English and comparative arts are recommended.)

Sophomore

Chem 301-302 Organic (short)	6
Chem 303-304 Organic Lab	3
or	
Chem 305-306-307 Organic (long)	9
Chem 308-309 Organic Lab	4
Chem 325 Instrumental Analysis	5
Zool 303 Comp Vert Anatomy	6
Zool 325 General Genetics	5
Arts and Sciences College degree requirements and/or electives. (Courses in English and com- paratives arts are recommended.)	

Junior

Phys 201-202-203 Introduction	12
Micr 411 General Microbiology*	6
Zool 448 Cell Physiology	4
or	
Zool 460 Animal Physiology	5
Arts and Sciences College degree requirements and/or electives.	

Senior

Chem 351 Physical Chemistry	4
or	
Zool 463 Cell Chemistry	4
IndT 336 Bioelectronics*	3
Zool 404 Comparative Vertebrate Anatomy Mammalian*†	6
Zool 406 Vertebrate Embryology*†	6
Arts and Sciences College degree requirements and/or electives.	

*Suggested

† Students who elect these courses and plan to leave at the end of the third year should include these courses in the junior year.

Preparation for Microbiology, Public Health and Sanitarians

This four-year program leads to the bachelor of science degree majoring in the Zoology Department and prepares graduates for careers as public health sanitarians, for work in municipal, state and federal public health laboratories and in the food and drug industries or in research laboratories. The bachelor's degree in this field qualifies the student for further training in a school of public health or university department of bacteriology or microbiology leading to the master's or doctor's degree in these areas.

For students planning to do graduate work in bacteriology or public health, it may be well to omit some of the advanced

bacteriology courses, substituting additional training in mathematics, chemistry, biochemistry or physiology; such changes should be planned in consultation with the faculty adviser.

Microbiology

Freshman

Bot 102 Plant Biol	5
Chem 121 Introduction	5
Chem 142 Chemical Energetics	5
Chem 143 Quantitative Analysis	5
Math 263A-B Analytic Geometry and Calculus	10
Zool 101-203 Prin of Biol and Zool	11
University and Arts and Sciences College degree requirements and/or electives.	

Sophomore

Chem 301-302 Organic (short)	6
Chem 303-304 Organic Lab	3
or	
Chem 305-306-307 Organic (long)	9
Chem 308-309 Organic Lab	4
Zool 303 Comparative Vertebrate Anatomy .	6
Zool 325 Genetics	5
Arts and Sciences College degree requirements and/or electives.	

Junior

Chem 325 Instr. Methods of Analysis	5
Chem 351 Physical	4
Phys 201-202-203 Introduction	12
Micr 411 General Microbiology	6
Micr 412 Microbiological Technique	4
Zool 463 Cell Chemistry	4
Arts and Sciences College degree requirements and electives.	

Senior

Micr 413 Pathogenic Bacteriology**	6
Micr 415 Immunology**	7
Micr 417 Advanced General Microbiology**	6
Micr 419 Bacterial Physiology**	6
Zool 441 Parasitology*	6
or	
Bot 340 Mycology	5
Zool 448 Cell Physiology	4
or	
Zool 460 Animal Physiology	5
Zool 485 Research*	5
Arts and Sciences College degree requirements and/or electives.	

* Suggested

**Should be deferred until Graduate School by those going for advanced degrees.

The following prepares students for careers in public health and as sanitarians.

Freshman-Sophomore

Same as for microbiology major (See above)

Junior

Chem 325 Instr. Methods of Analysis	5
Micr 411 General Microbiology	6
Phys 201-202-203 Introduction	12
Zool 435 General Entomology	6

or

Zool 437 Medical Entomology	4
Arts and Sciences College degree requirements and/or electives. Soc 302 and EdGs 410 suggested.	

Senior

Micr 413 Pathogenic Bacteriology	6
Micr 417 Advanced General Microbiology ..	6
Zool 441 Parasitology	6
Zool 448 Cell Physiology	4

or

Zool 460 Animal Physiology	5
Arts and Sciences College degree requirements and/or electives.	

Preparation for Nursing

Ohio University has a two-year program leading to the associate in science in nursing available at the Portsmouth and Zanesville campuses. Students interested in a bachelor's degree program in nursing can obtain the bachelor of arts or the bachelor of science degree from Ohio University and then complete nurse's training in an approved school of nursing. In many cases the time required for the hospital training is shortened as a result of the student entering the program with a bachelor's degree.

A recommended alternative is the completion of two years of prescribed college work at Ohio University and transfer to a collegiate school of nursing which grants the bachelor of science in nursing degree upon completion of the program. The professional program in the collegiate school of nursing requires 32 months for completion, including vacation periods.

A student who has completed a hospital school of nursing program and who wishes to enroll at Ohio University for a degree in the College of Arts and Sciences will be granted a limited amount of credit toward the degree, following a review of his record by the university examiner and the dean of the college.

The following curriculum includes courses which provide background for a nursing program and will lead to the completion of the bachelor's degree at Ohio University. If the first two years of the program are completed, a student will be prepared for admission to a collegiate school of nursing.

Freshman

Bot 102 Plant Biol	5
Chem 121 Introduction	5
Chem 142 Chemical Energetics	5
Chem 143 Quantitative Analysis	5
Psy 101 General	5
Psy 375 Educational	5
Zool 101-203 Prin of Biol and Zool	11
Arts and Sciences College degree requirements and/or electives.	

Sophomore

Chem 301-302 Organic (short)	6
Chem 303-304 Organic Lab	3
Zool 300 Elements of Anatomy	6
Zool 325 General Genetics	5
Arts and Sciences College degree requirements and/or electives.	

Junior

Micr 411 General Microbiology	6
Micr 413 Pathogenic Bacteriology	6
Zool 345 Human Physiology	4
Arts and Sciences College degree requirements and/or electives.	

Senior

Arts and Sciences College degree requirements and/or electives.

Preparation for Optometry

The requirements for admission to schools of optometry are not uniform. A minimum of 90 hours exclusive of military science and physical education is required. The following suggested curriculum will meet the admission requirements for a collegiate program and consequently of most independent schools of optometry. There is no *in absentia* arrangement for optometry.

Freshman

Chem 121 Introduction	5
Chem 142 Chemical Energetics	5
Chem 143 Quantitative Analysis	5
Math 263A-B Analytic Geometry and Calculus	10
Zool 101-203 Prin of Biol and Zool	11
Arts and Sciences College degree requirements and/or electives.	

Sophomore

Chem 301-302 Organic (short)	6
Chem 303-304 Organic Lab	3
Phys 201-202-203 Introduction	12
Psy 101 General	5
Humanities Social Science	

Further information relative to requirements and the profession of optometry may be obtained by writing to the American Optometric Association, Department of Public Information, 4030 Chouteau Avenue, St. Louis, Missouri 63110.

Preparation for Pharmacy

Most schools of pharmacy require 90 quarter hours of academic credit, exclusive of physical education and military science, for admission. The following general program will meet the requirements of most schools. There is no *in absentia* arrangement for pharmacy.

Freshman

Chem 121 Introduction	5
Chem 142 Chemical Energetics	5
Chem 143 Quantitative Analysis	5
Math 263A-B* Anal Geometry and Calculus .	5-5
Zool 101-203 Prin of Biol and Zool	11
Arts and Sciences College degree requirements and/or electives.	

*Math 263A required; 263B suggested.

Sophomore

Chem 305-306-307 Organic (long)	9
Chem 308-309 Organic Lab	4
Econ 101 Principles	4
Phys 201-202-203 Introduction	12
QM 354 Quantitative Methods I	4
QM 355 Quantitative Methods II	3
Zool 300 Elements of Anatomy	6
Humanities and/or Social Science	

The student may complete this program plus the additional requirements for the AB or BS degree with a major in zoology or chemistry.

Since some pharmacy schools require additional courses not listed here, students wishing to go to a specific school should write to the school of their choice for additional requirements as soon as possible.

Preparation for Physical Therapy

The following programs extending over a period of three or four years at Ohio University are recommended to those students who wish to enter the field of physical therapy.

Upon completion of 135 quarter hours (three-year program) and if a scholastic average of 2.0 or better on all hours attempted has been maintained, the student is

Arts and Sciences

eligible for admission to a school of physical therapy fully accredited by the American Medical Association and American Physical Therapy Association. Upon satisfactory completion of the three-year program at Ohio University, including degree requirements and the course in physical therapy, Ohio University will award the student the bachelor's degree *in absentia* with a major in physical therapy.

The recommended four-year programs listed below are designed for those students who do not complete the degree *in absentia* but who wish to pursue a career in physical therapy after completing a bachelor's degree majoring in either zoology or psychology. Upon satisfactory completion of the bachelor's degree, the graduate becomes eligible to enter an accredited school of physical therapy.

MAJOR IN PHYSICAL THERAPY

Freshman

Chem 121 Introduction	5
Chem 122 Introduction	5
Chem 123 Introduction	5
Math 113 Algebra	5
or	
Math 140A-B Intro to Math for Business	10
Psy 101 General	5
Zool 101-203 Prin Biol and Zool	11
Arts and Sciences College degree requirements and/or electives.	

Sophomore

Gr 127 Words in English	3
HPER 202 Personal and Community Health	4
Psy 373 Child	5
Soc 302 Principles	5
Zool 301 Human Anatomy	6
Zool 345 Human Physiology	4
Zool 346 Human Physiology Lab	2
Zool 352 Kinesiology	4
Arts and Sciences College degree requirements and/or electives.	

Junior

EdGS 410 Human Relations*	3
HPER 329 Athletic Training	4
HPER 333 Theory of Adapted Activities* ...	4
HSS 108 Introduction to Speech Disorders ...	3
or	
HSS 336 Speech and Hearing Disorders in the Public Schools	3-4
Phys 201-202-203 Introduction	12
Psy 331 Psychology of Adjustment*	4
Psy 375 Educational*	5

Psy 432 Abnormal Psychology*	5
Zool 445 Physiology of Exercise	4
Zool 446 Physiology of Exercise Lab	2
Arts and Sciences College degree requirements and/or electives.	

Senior

To be completed at an accredited school of physical therapy.

*Suggested

MAJOR IN PSYCHOLOGY

(For physical therapy only. For AB degree in psychology, see p. 215.)

Freshman

Chem 121-122-123 Introduction	15
Math 113 Algebra	5
or	
Math 140A-B Intro to Math for Business	10
Psy 101 General	5
Zool 101-203 Prin Biol and Zool	11
Arts and Sciences College degree requirements and/or electives.	

Sophomore

Psy 321 Elem Stats for Behavioral Science ..	5
Psy 326 Experimental Psychology	5
Psy 373 Child	5
Soc 302 Principles	5
Zool 301 Human Anatomy	6
Zool 345 Human Physiology	4
Zool 346 Human Physiology Lab	2
Zool 352 Kinesiology	4
Arts and Sciences College degree requirements and/or electives.	

Junior

HPER 329 Athletic training	4
HSS 108 Introduction to Speech Disorders ...	3
or	
HSS 336 Speech and Hearing Disorders in the Public Schools	3-4
Phys 201-202-203 Introduction	12
Psy 331 Psychology of Adjustment	4
Psy 341 Behavioral Measurement	5
Psy 403 Learning	5
or	
Psy 404 Human Learning	5
Arts and Sciences College degree requirements and/or electives.	

Senior

EdGS 410 Human Relations*	3
Gr 127 Words in English	3
HPER 202 Personal and Community Health	4
HPER 332 Theory of Adapted Activities* ...	4
Psy 410 Motivations and Emotions	5
or	
Psy 436 Social	5
or	
Psy 451 Clinical and Counseling	5

Psy 412 Physiological Psychology	5
Psy 432 Abnormal	5
or	
Psy 433 Psychology of Personality I	5
Psy 475 Psychology of Exceptional Child	5
Zool 445 Physiology of Exercise	4
Zool 446 Physiology of Exercise Lab	2
Arts and Sciences College degree requirements and/or electives.	

*Suggested

MAJOR IN ZOOLOGY

Freshman

Chem 121-122-123 Introduction	15
Math 113 Algebra	5
or	
Math 140A-B Intro to Math for Business	10
Math 263A Anal. Geom and Calculus*	5
Psy 101 General	5
Zool 101-203 Prin Biol and Zool	11
Arts and Sciences College degree requirements and/or electives.	

Sophomore

Gr 127 Words in English	3
HPER 202 Personal and Community Health	4
Psy 373 Child	5
Soc 302 Principles	5
Zool 301 Human Anatomy	6
Zool 325 General Genetics	5
Zool 345 Human Physiology	4
Zool 346 Human Physiology Lab	2
Zool 352 Kinesiology	4
Arts and Sciences College degree requirements and/or electives.	

Junior

Chem 301-302 Organic	6
HPER 329 Athletic Training	4
HPER 333 Theory of Adapted Activities* ...	4
HSS 108 Introduction to Speech Disorders ...	3
or	
HSS 336 Speech and Hearing Disorders in the Public Schools	3-4
Phys 201-202-203 Introduction	12
Psy 331 Psychology of Adjustment	4
Zool 303 Comparative Vertebrate Anatomy*	6
Arts and Sciences College degree requirements and/or electives.	

Senior

EdGS 410 Human Relations*	3
Psy 375 Educational*	5
Psy 404 Human Learning*	5
Psy 412 Physiological*	5
Psy 432 Abnormal	5
Zool 404 Comparative Vertebrate Anatomy-Mammalian*	6

Zool 408* Histology	6
Zool 445 Physiology of Exercise	4
Zool 446 Physiology of Exercise Lab	2
Zool 460 Animal Physiology*	5
Zool 461 Animal Physiology Lab*	4
Arts and Sciences College degree requirements and/or electives.	

*Suggested

Preparation for Physics Technology

The curriculum below will qualify students for many physics career opportunities in industry or government laboratories and provide excellent preparation for graduate study.**** The student should also consult the physics curricula and courses in the *Courses of Instruction* section of the catalog.

Freshman

Fresh Eng*** 5	Phys 251 ...5	Phys 252 ...5
Math 263A .5	Math 263B .5	Math 263C .5
	InCo 101 .3	
Requirements and/or electives** (foreign language, as required)**		

Sophomore

Chem 121 ..5	Chem 122 ..4	Chem 123 ..4
Phys 253 ...5	Phys 306 ...2	Requirements
	Math 340 ..5	and/or electives
Requirements and/or electives** (foreign language, as required)**		

Junior

Phys 311 ...4	Phys 312 ...4	Requirements
Phys 321 ...4	Phys 322 ...4	and/or electives
Math 440 ..3	Math 441 ...316
Requirements and/or electives** (foreign language, as required)**		

Senior

Phys 411 ...4	Phys 412 ...4	Requirements
Phys 451 ...4	Phys 452 ...4	and/or electives
	16
Requirements and/or electives** (foreign language, as required)**		

**See requirements for the BS degree.

***The student may fulfill the freshman English requirement by selecting one course (5 hours) from 177, 178, 179, 187, 188 and 189 or the student placed in Honors English should select one course (5 hours) from 197, 198 and 199.

****Students who are not well prepared may take Phys 201, 202 and 203 in the freshman year and 305, 306 in the sophomore year on the advice of the chairman of the Department of Physics.

Preparation for Sanitarians

See Preparation for Microbiology, Public Health and Sanitarians.

Preparation for Theology and Religion

It is recommended that a student planning to enter a theological seminary or to do graduate study in religion take a broad program of undergraduate courses including the following (with minimal quarter hours of credit suggested in each area): philosophy (12); Bible and history of religions (15); English composition and literature, and world literature (21); history (15); social sciences (21); foreign languages (18, preferably in Greek, Hebrew, Latin, French or German); natural sciences (9); public speaking (3). The course program should be arranged to meet the requirements of the bachelor of arts degree. It is advisable to major in philosophy, English or one of the social sciences. The student should also check the entrance requirements of the theological seminary or graduate school of his choice and plan his course accordingly.

Preparation for Veterinary Medicine

Schools of veterinary medicine require a minimum of 90 quarter hours of academic credit, exclusive of physical education and military science, for admission and some schools now require 140 quarter hours. Suggested courses for a third year of undergraduate work are outlined below and a student who completes 140 hours of credit and meets the graduation requirements except for total hours credit is eligible for the degree *in absentia* privilege.

Some schools of veterinary medicine require applicants to take the Veterinary Aptitude Test. A student should check with the veterinary school as to this requirement.

Freshman

Bot 102 Plant Biol*	5
Chem 121 Introduction	5
Chem 142 Chemical Energetics	5
Chem 143 Quantitative Analysis	5
Zool 101-203 Prin Biol and Zool	11
Math 263A-B Analytic Geometry and Calculus	10
Arts and Sciences College degree requirements and/or electives.	

*Bot 102 required for degree in zoology

Sophomore

Chem 301-302 Organic (short)	6
Chem 303-304 Organic Lab	3
Phys 201-202-203 Introduction	12
Zool 303 Comp Vert Anatomy	6
Zool 325 General Genetics	5
Arts and Sciences College degree requirements and/or electives.	

Junior

Micr 411 General Microbiology	6
Zool 406 Vert Embryology	6
Zool 404 Comp Vert Anat	6
Zool 460 Animal Physiology	5
Zool 461 Animal Physiology Lab	4
Arts and Sciences College degree requirements and/or electives.	

Suggested departments from which courses in humanities and social sciences may be selected include comparative arts, economics, English (literature), geography, government, history, philosophy and sociology and anthropology.

*Suggested

Preparation for Water Resources

This curriculum is recommended for those students in the College of Arts and Sciences who wish to specialize in the investigation of surface-water and groundwater supplies. The student should major in geology, with additional courses in mathematics, chemistry, physics and civil engineering.

Students should enter the program as freshmen in order to complete the curriculum in four years. The following sequence of courses is recommended as a minimum:

Freshman

Geol 204-205 Physical Processes in Geology, Concepts in Historical Geology	8
Geol 330 Principles of Geomorphology	5
Chem 121, 142, 143 Fundamentals of Chemistry	15
Math 263A, B Analytical Geometry and Calculus	10
Requirements and/or electives	

Sophomore

Geol 310 Rocks and Minerals	5
Geol 438 Glacial Geology	5
Math 263C Analytical Geometry and Calculus	5
Phys 251-252-253 General Physics	15
Requirements and/or electives	

Junior

CE 220, 321 Applied Mechanics	8
Math 340 Differential Equations	5
Geol 350 Principles of Sedimentology	4
Geol 353 Principles of Stratigraphy	4
Geol 360 Structural Geology	5
Geol 386 Geologic Field Methods	3
Geol 387 Summer Field Camp	9
Requirements and/or electives	

Senior

CE 340 Fluid Mechanics	5
CE 343 Hydrology	3
Geol 480-481 Appl Ground Water Hydrology I and II	8
Geol 476 Subsurface Methods	4
Geol 485 Geophysics	4

Additional courses in CE 415, 450, 451, 452 and economics are recommended.

Preparation for Advanced Training

BOTANY

(AB or BS Degree)

Freshman

Botany (General, Plant and Animal Biology) ..	15
Chem 121, 142, 143	15
Math 263A, 263B	10
Arts and Sciences college degree requirements or electives.	

Sophomore

Chem 301, 302, 303, 304 (For stronger grounding in chemistry, students should consider taking Chem 305, 306, 307, 308, 309 in place of Chem 301-304)	9
English 177, 178 or 187, 188	10
Botany 307, 308, 309	17
Arts and Sciences college degree requirements or electives.	

Junior

Phys 201, 202, 203	12
Bot 424	6
Bot 431	5
Zool 325	5
Arts and Sciences college degree requirements or electives.	

Senior

Bot 405	2
Bot 426	5
Bot 475	3
Arts and Sciences college degree requirements or electives.	

ZOOLOGY

The following program will provide the background required for admission to graduate school in zoology. Substitutions can be made in the junior-senior program, but it is recommended that the first two years be followed closely.

Freshman

Bot 102 Plant Biol	5
Chem 121 Introduction	5
Chem 142 Chemical Energetics	5
Chem 143 Quantitative Analysis	5
Zool 101-203 Prin Biol and Zool	11
Arts and Sciences College degree requirements and/or electives.	

Sophomore

Chem 301-302 Organic (short)	6
Chem 303-304 Organic Lab	3
or	
Chem 305-306-307 Organic (long)**	9
Chem 308-309 Organic Lab**	4
Math 263A-B-C* Analytic Geometry and Calculus	15
Phys 201-202-203 Introduction	12
Arts and Sciences College degree requirements and/or electives.	

Junior-Senior

Chem 351 Physical Chemistry	4
IndT 336 Bioelectronics*	3
Psy 321 Elementary Statistics*	5
Zool 303 Comparative Vertebrate Anatomy ..	6
Zool 325 General Genetics	5
Zool 406 Vertebrate Embryology	6
Zool 430-431 Invertebrate Zoology	12
Zool 448 Cell Physiology	4
or	
Zool 460 Animal Physiology	5
Zool 461 Animal Physiology Lab	4
Zool 463 Cell Chemistry	4
Zool 475 Animal Ecology	3
Zool 476 Animal Ecology Lab	2
Zool 479 Evolution	4
Arts and Sciences College degree requirements and/or electives.	

* Of the choices, this is recommended.

**Suggested

The College of Business Administration

John M. Peterson, *Dean*

Lucian P. Spataro, *Associate Dean*

Herschel R. McNabb, *Assistant Dean*

Consistent with its character and history as a pioneer educational institution, Ohio University inaugurated courses in business administration in 1893, at a time when few colleges and universities offered instruction in this area. As the conception of collegiate training for business broadened, the offerings were steadily expanded. Today the College of Business Administration offers comprehensive programs of study in business which lead to the bachelor of business administration degree. The college is accredited by and is a member of the American Association of Collegiate Schools of Business.

It is as essential to teach students the art of living as it is to provide them with professional business training. Further, it is a duty of every college graduate to participate in, and, if possible, to assume responsibility for intelligent leadership in civic, governmental, professional and social activities of life. Every student in the College of Business Administration, therefore, is required to take some courses offered by the other colleges of the University in order to widen his scope of knowledge and interest.

Through the use of elective hours in programs of study in the College of Business Administration, a student may emphasize a special interest by electing courses offered by any other college of the University. Such courses are open to students in the College of Business Administration on the same basis as they are open to students in those colleges.

The College of Business Administration, in turn, serves students enrolled in the other colleges and admits them to its courses on the same basis as students registered in the College of Business Administration.

The mutual relationship among the colleges, whereby a student in one college may take courses in another, gives a breadth of combinations in education which only a university can offer. However, it is impossible to set up predetermined curricula for each and every possible combination. For this reason, the College of Business Administration stresses its faculty advisory system for students. Each student may choose as an adviser a member of the College of Business Administration who is a specialist in the student's field of interest. Student and adviser together then mold the outlines of courses into an integrated program of study best suited for the student's individual needs.

A candidate for the degree of bachelor of business administration must complete the general University requirements for graduation which call for a minimum of 180 quarter hours with a point-hour ratio of 2.0 (C) on all hours attempted, but including only the final hours and points in repeated courses. This point-hour requirement applies to his total record and also to courses taken in the college. The College of Business Administration limits transfer credit for required business courses taken at a lower division level to such courses as it offers at that lower level.

Bachelor of Business Administration

All students following programs of study leading to the degree of bachelor of business administration must take the subjects indicated in the freshman, sophomore, junior and senior programs of the curriculum outline. The sequence of courses provides a logical development of the student's knowledge.

Areas of Concentration

It is felt that a student who follows a program of study leading to the degree of bachelor of business administration has automatically chosen a field of concentration in general business. Further concentration by way of a major is not required. However, a student may elect an area of concentration from one of the following fields:

Accounting

- General accounting
- Administrative accounting
- Preparation for public accounting (CPA) profession

Business and Industrial Communications

Economics

- Economic theory
- Economic history
- Economic development and planning
- International economics
- Labor economics and manpower resources
- Public finance and government economic policy
- Econometrics
- (The program leading to the bachelor's degree with a major in economics is administered by the College of Arts and Sciences. Students desiring to major in economics should enter that college.)

Finance

- Banking
- Financial management
- Insurance
- Investment management

Management and Organizational Behavior

- Organizational behavior
- Personnel and industrial relations

Marketing

- Consumer behavior
- Industrial

International

- Market research
- Quantitative marketing
- Sales management

Quantitative Methods

- Econometrics
- Operations analysis and production
- Quantitative marketing
- Statistics
- Systems and computer management

A program of concentrated study is individually arranged by the student in consultation with a faculty adviser. A student who elects an area of concentration is not required to take more than 12 quarter hours in that field in addition to the specific business courses in the degree curriculum.

Curriculum in Business Administration

Freshman

The freshman program should include:

Econ 101 ...4 Econ 102 ...4 Phil 102* ...3
Math 140A ...5 Math 140B ...5

Sophomore

Acct 101 ...5 Acct 102 ...4 BIC 220 ...3
QM 354 ...4 QM 355 ...3 QM 356 ...3

Junior

BusL 355 ...4 BusL 356 ...4 BIC 320 ...3
Fin 323 ...4 Fin 325 ...4 Econ 303 ...4
Mkt 301 ...4 Mkt 302 ...4 Mgt 300 ...4

Senior

BIC 420 ...3 Econ 304 ...4 BA 470 ...4

*Phil 320 may be substituted after the sophomore year.

In addition to the above curriculum requirements, the student shall elect a *minimum of 12 approved credit hours in each of three of the following nonbusiness fields:*

- Archaeology
- Art History
- Astronomy
- Botany
- Chemistry
- Classical Languages
- Comparative Arts
- English
- Geography

Geology
Government
History
†Mathematics
Modern Languages
††Philosophy
Physics
Psychology
Sociology and Anthropology
Zoology

†If mathematics is elected as a nonbusiness field, Math 140A and Math 140B may be included in the field requirement.

††If philosophy is elected as a nonbusiness field, Phil 102 (320) may be included in the field requirement.

To complete the minimum 180 quarter hours for the bachelor of business administration degree, a student may, with two exceptions, make his selection from courses in the College of Business Administration, from courses in the above nonbusiness fields and from courses offered by other colleges in the University. Only three quarter hours of health, physical education and recreation are acceptable toward the BBA degree; no credit is allowed for ROTC summer camps.

Courses included in the 180 hour minimum for the BBA degree must be chosen so at least 72 quarter hours are earned in business areas and at least 72 quarter hours are earned in nonbusiness areas.

Preparation for Law School

A student in the College of Business Administration who plans to enter law school should follow the bachelor of business administration degree curriculum and also elect, with the approval of his adviser, courses in other fields, especially American government, American and English history, English, philosophy, interpersonal communication and other theory courses in the College of Arts and Sciences, except those courses which substantially duplicate material contained in the typical law school curriculum.

The Ohio Supreme Court in its regulations governing the admission to the practice of law in Ohio provides that a student entering law school must be able to show that he possesses an undergraduate degree from an approved college if he wishes to take the Ohio Bar Examination. Law schools in the state of Ohio have supplemented this Supreme Court rule by requiring an under-

graduate degree of *all* entering students, regardless of the state in which they plan to take the bar examination.

However, for the benefit of those students who do not plan to take the Ohio Bar Examination and who do not plan to seek admission to an Ohio law school, a degree *in absentia* program is available as described in the following statement.

A student who desires to enter a school of law located outside Ohio at the end of three years of college work and receive the bachelor of business administration degree from Ohio University after completing his first year in law school may do so provided the following conditions are met: the student has the written approval of the dean of the College of Business Administration; the requirements of the University College are met; a minimum of 135 quarter hours, including the required courses in the bachelor of business administration degree curriculum (BusL 355-356 excluded), are completed with a point-hour ratio of 2.0 on all hours attempted, and a full year's work in an accredited law school is completed with an average equivalent to that prescribed for the bachelor's degree at Ohio University and the student is eligible for advancement without condition to the second year.

If there is any possibility that a student will desire to take the Ohio Bar Examination, he is urged to obtain his undergraduate degree before entering law school.

SCHOOL OF ACCOUNTING

C. B. Stephenson, *Director*

The purpose of the School of Accounting is to provide a professional atmosphere and a professional identity for students who specialize in accounting. It recognizes that accounting deserves the recognition now accorded professions such as law, medicine, engineering, journalism and others. Students in the School of Accounting receive individual counseling as they select the sequence of courses to best fit individual abilities and career goals.

The School of Accounting offers upper level specialization courses in governmental accounting, industrial accounting and in

preparation for the uniform CPA examination. These courses, taken after a broad exposure to business subjects and nonbusiness liberal arts subjects, lead to a bachelor of business administration degree.

The Accounting Profession Today

Once regarded as little more than a required chore, accounting is now accepted as playing a vital role in the nation's economy. Instead of limiting himself to the recording and checking of transactions, the accountant now helps management plan and control operations. He helps analyze and solve complex business problems. As a consequence, the profession has been growing at a rate greater than that of any other profession. The demand for accountants is much greater than the current supply, and forecasts indicate little change for the future. Corporations, public accounting firms and governmental units continue to express need for qualified accountants.

Internship

A special feature of the undergraduate program involves a combining of the practical and the theoretical in an internship assignment. Qualified senior students in the School of Accounting have an opportunity to spend the winter quarter working as junior auditors in public accounting firms. The winter quarter is the "busy season" for most firms, thus providing a broad spectrum of audit experiences and a chance to apply the lessons learned in the classroom. The intern will be paid during this three-month period, in addition to earning a minimum of three credit hours. The selection of interns and the assignments are made by the director of the School of Accounting.

DIVISION OF RESEARCH

The College of Business Administration has maintained a Division of Research since 1961. The objectives of the division are to carry on research in the fields of business and economics; to promote and facilitate the research of the faculty, and to publish

the results of that research. With respect to the last objective, the division has initiated the publication of a monograph series; annually holds a faculty symposium on research, the proceedings of which are published, and maintains a reprint series of articles by faculty members of interest to the business community and of talks by various business speakers who visit the Athens campus under the auspices of the College Lecture Series.

It is felt that the activities of the Division of Research contribute substantially to the professional development of College of Business Administration faculty. In turn, the results of that research aid in the educational process of all business administration students by exposing them through the faculty to new developments in the field and acquainting them with the process of information gathering and analysis. The division maintains a library of statistical and descriptive material relating to the U.S. economy as a whole and to various segments of business activity. Students may, with the cooperation of individual faculty members, make use of this material in preparing written reports for classroom purposes.

OHIO COUNCIL ON ECONOMIC EDUCATION

This council is an organization of leaders from education, business, labor, agriculture and other professions working together to promote greater economic understanding through objective study. It is a service organization to the schools and colleges in Ohio.

The council presents a program of instruction, research and community relations to schools, colleges and other educational institutions. It is dedicated to promote a better understanding of the American economy and its relation to economic problems and international developments. Its chief goal is accomplished through the pre-service and in-service training of teachers by means of workshops, institutes, conferences and school consultations. Research is conducted in the fields of curriculum development, publications and experimental teaching projects. Consultations consist of working with schools in curriculum development and instruction in economic concepts and understanding.

The College of Communication

John R. Wilhelm, *Dean*

Claude E. Kantner, *Associate Dean*

Thomas Dunlap, *Assistant Dean*

The College of Communication includes the School of Hearing and Speech Sciences, the School of Interpersonal Communication, the School of Journalism, the School of Radio-Television and the Center for Communication Studies.

The college was created to meet more fully the communication needs of a changing society. New forms of communication, the growth of information and interest in the theory and processes of communication and in communication barriers and disorders, the growth of the communication systems and the need for better communication between peoples, races, economic groups and among nations generally were all factors in a decision that Ohio University should move on a broad and substantial basis to prepare graduates for both traditional roles and for responsibilities not previously acknowledged.

The college is equipped to train graduates for professional careers in journalism, in broadcasting, for telecommunications, for organizational and interpersonal communication, as well as for research in all phases of communication, communication sciences and communication disorders. The college operates on the assumption that professional competency in these areas calls for the highest possible proficiency in the field of specialization, plus the broadest possible liberal education in other disciplines.

In journalism, a fully accredited school offers work in advertising, magazine journalism, news-writing and editing, public relations, radio-television, foreign correspondence and photojournalism.

The journalism school is the third largest in the country, and each year graduates more than 200 seniors who move into

professional careers on leading newspapers, magazines and news-gathering organizations as well as into advertising and public relations positions. Careers take them to all parts of the world.

The School of Radio-Television trains professionals for work in broadcasting generally, with specialized careers in radio-television news, station and network management, radio and television production and programming, as well as joint courses with the School of Journalism in reporting, editing, public relations, advertising and management.

Students work in the University broadcast services at radio station WOUB and the University television station, WOUB-TV, for actual experience. A special sports broadcast program is offered.

The School of Interpersonal Communication offers courses in public speaking, debate and discussion, small group and organizational communication, persuasion, rhetoric, the history of public address, etc. Students may study the problems and processes of communication first hand in business, industrial, educational and other types of organizations in the Center for Communication Studies and the Resource Center for Speech Communication. An intercollegiate forensic program is open to all students.

Hearing and speech sciences deal with the science of communication from the points of view of anatomy, neurology, physiology, physics, psychology and linguistics and with the pathology and treatment of speech and hearing disorders. The undergraduate program leads to a special certificate in speech and hearing therapy in the public schools. The program in speech pathology is

accredited by the American Board of Examiners in Speech Pathology. Opportunities for clinical observation and experience are available in the extensive program of clinical services both on-campus and in southeastern Ohio.

All programs of study at the undergraduate level lead to the bachelor's degree. More detailed descriptions and the requirements for the various majors offered in the four schools are given in the pages immediately following.

Graduate programs leading to the MA and PhD degrees are available in all areas. These are described in detail in the bulletins issued by the Graduate College.

SCHOOL OF HEARING AND SPEECH SCIENCES

Richard E. Ham, *Director*

The school grants BS, MA and PhD degrees in hearing and speech sciences. On the bachelor's level students can major in public school therapy or in clinic therapy or both. All students are urged, but not required, to complete five consecutive years, terminating with the MA degree. Practicum training occurs in the campus Speech and Hearing Clinic, five regional clinics, public schools, mental retardation centers and other clinic or educational settings. Consultation concerning all types of communicative disorders may be arranged with the Coordinator of Clinical Services. Remedial training and diagnostic evaluation are provided without charge to University students. The audiological division evaluates all types of hearing problems from infancy to old age, including hearing aid evaluations. Nominal fees are charged for speech or hearing services to nonstudents. Research in therapy, acoustics and other areas of communication is implemented by well-equipped laboratories with four soundproof rooms.

The program in speech pathology is accredited by the American Board of Examiners in Speech Pathology and Audiology and is an affiliate member of the National Association of Hearing and Speech Agencies. A local speech and hearing organization is available to students. Information about or-

ganizations, major programs and requirements can be obtained in printed form from the school office in Ewing Hall.

Major in Hearing and Speech Sciences

Freshman

Eng5 Sci3-4 Eng3-5
Sci3-4 Hum3 Sci3-4
Hum3 Soc. Sci3 Hum3
Psy 1015 Gen. Elect .3 HSS 107 ...2

A 2.25 GPA at end of freshman year is required to enter major; below 2.25 but above 2.19 may enter on trial. Majors are assigned advisers and required to meet with them. Program is complex and highly interrelated. Majors must not alter program without consulting adviser. Regardless of specialization plans all HSS majors should apply third quarter freshman year to College of Education for admission to teacher education (see catalog on College of Education).

Sophomore

Must declare major and have GPA of 2.25 or better; can be on trial if above 2.19. During sophomore year must pass speech proficiency test, establish phonetic transcription proficiency and earn C or better in all HSS courses.

Soc. Sci3 Psy 3314 Soc. Sci3
Gen. Elect3 EdSe 2504 InCo 220
Psy 3755 HSS 3105 or 115 ...3
HSS 1083 HSS 350 ...3,4 Psy 3735
HSS 309 ...3 HSS 440B ..1 HSS 351 ...3,4
HSS 440A ..1 HSS 440C ..1

HSS grades below C must be made up on regular catalog schedule. Regardless of specialty plans all HSS majors should apply in third quarter to College of Education for junior standing (see catalog on College of Education). Between sophomore and junior years, complete EdPl 360. Must have C or better in HSS 440A, B, C, in order to enter HSS 441 junior year.

Junior

Must have a GPA of 2.25 or better, and at least a 2.25 in certification courses. Must earn C or better in all HSS courses. Cannot continue without speech clearance. Specialty other than public school therapy must be approved by HSS director.

Eng3 Eng3 HSS 370 ...3,4
Psy 4755 EdSe 351....5 HSS 4194
HSS 313 ...3,4 HSS 314 ...3,4 HSS 422 ...3,4
HSS 4185 HSS 415 ...5 HSS 441C ..1
HSS 441A ..1 HSS 441B ..1

Cannot continue after junior year without clearance on phonetic transcription, GPA of 2.25 or better and without C or better in HSS 441A, B, C.

Senior

Must student teach, complete clinical internship or meet special practicum requirements (approved by director). Must leave one full quarter vacant for student teaching or clinical internship.

Student Teaching	Other Two Quarters
Quarter	
EdPl 4616	HSS 371 (F or W) .3,4
EdPl 4626	HSS 424 (F or W) .3,4
EdPl 4653	EdSe 4803
or	HSS 442A2
HSS 4372	HSS 472 (W or S) .3,4
	Gen. Elect3

EdSe 480 must follow student teaching, if possible. If not student teaching, replace with 11-15 hours of HSS 442B.

Note: In College of Communication, the education and liberal arts courses largely are certification requirements, not graduation requirements. Special requirements for non-certification majors can be procured at the school office in Ewing Hall.

SCHOOL OF INTERPERSONAL COMMUNICATION

Paul H. Boase, *Director*

The School of Interpersonal Communication offers a general, liberal education, emphasizing the scientific and artistic bases of communication. Students in three undergraduate majors study group communication and public address, communication theory and process, organizational communication as applied to business, industrial and educational institutions and speech communication in the secondary schools.

Specific major programs are developed to meet the needs of each student. A combination of areas and specific courses can lead to professional or preprofessional competence in such fields as teaching, foreign service, law, politics and government, theology, public relations, labor-management relations, personnel, campaign and propaganda administration and poll and survey management. The School of Interpersonal Communication places qualified undergraduate and graduate majors in trainee or internship programs on an appropriate credit or non-credit basis as suitable opportunities become available.

Through its forensic program, interpersonal communication provides the opportunity for all students to meet outstanding undergraduates from 300 or more colleges and

universities in intellectual competition. Thirty tournaments at other schools and three held on campus enable students to develop skills in debate, extemporaneous speaking, oratory, discussion and oral interpretation. Excellence in scholarship and superior performance in speech communication are rewarded in several ways. Delta Sigma Rho-Tau Kappa Alpha, national honorary, is open to students in the upper third of their class who excel in forensics. The Lorin C. Staats Award is given to the outstanding senior who has participated with distinction in several forensic areas. The outstanding junior or senior debater receives the Francis McVicker Maxwell Award. Entering freshmen with outstanding high school forensic records are eligible for special talent awards of \$405.

CENTER FOR COMMUNICATION STUDIES

The Center for Communication Studies consists of faculty members and space and equipment to generate, organize and conduct research across a broad spectrum of human communicative behavior and disseminate reports on the research. In addition, it provides a service function to both academic and nonacademic organizations by providing personnel to develop and teach courses and seminars dealing with communicative behavior and problems.

Research studies may be generated through standard academic channels or on a contract basis for organizations outside the University which desire to provide financial support for systematic research in the area of communicative behavior. Investigations typically employ experimental or descriptive research methodology; however, no methodological approach which shows promise is excluded.

RESOURCE CENTER FOR SPEECH COMMUNICATION

The Resource Center for Speech Communication identifies, develops and collects learning materials for use in the improvement of instruction in communication. Listening tapes, recorded speeches, films and teaching guides are among those items available to both faculty and students throughout

the University. The center also takes an active role in planning and developing seminars, workshops and projects for students who are interested in communication and public education.

General Requirements for All InCo Majors

1. InCo 101 or InCo 103
2. Five hours of English selected from the following courses: 177, 178, 179, 187, 188, 189
3. *General Communication and Organizational Communication majors*
Nine hours in each of *two* of the following groups:
Humanities
Mathematics
Natural Sciences
Social Sciences

4. *General Speech with Certification majors*

Forty-five hours of general education distributed to include at least two courses in each of the following fields:

- Science and mathematics (one course in each)
- Comparative arts and/or philosophy
- Social science (Psy 101 required and can be counted as one of two courses)
- English and/or foreign language
- Physical education (three quarters)

Major in General Communication

Maximum freedom of choice in course selection is the primary feature of this major. Its aim is development of a broadly trained student in the liberal arts — humanistic aspects of interpersonal communication. Majors may prepare for careers in law, industry, theology, higher education, etc.

A. Required courses: 12 hours

Four courses are specifically required:

- InCo 107—Introduction to Language Behavior
- InCo 205—Techniques of Group Discussion
- InCo 215—Argumentation and Debate
- InCo 450—Introduction to Rhetorical Theory

B. Additional major courses: 40 hours

Students must select one course in *each* of the following areas:

Public Address	Communication Theory
InCo 353	InCo 334
A,B,C or D	InCo 335
InCo 412	InCo 444
InCo 433	InCo 446
InCo 435	InCo 452
InCo 442	
InCo 458	Group Process
InCo 460	InCo 404
	InCo 405
	InCo 445

Students must select one course in *three* of the following areas:

Theater Arts	Radio-Television
ThAr 100	R-TV 105
ThAr 215	R-TV 370
ThAr 220	R-TV 467
ThAr 301	
ThAr 370	Journalism
ThAr 371	Jour 105
ThAr 372	Jour 311
	Jour 412
Hearing and Speech Sciences	
HSS 108	
HSS 309	
HSS 310	

The remainder of the 40 hours may be selected from interpersonal communication, radio-television, theater, journalism or hearing and speech sciences.

C. General electives as necessary to complete minimum University requirement of 180 quarter hours for graduation.

Major in General Speech with Certification

This major provides a program for students interested in high school teaching. The emphasis stresses a liberal arts education as related to interpersonal communication and professional preparation for state certification.

This major provides three program options to students enrolled in the School of Interpersonal Communication: A communication comprehensive emphasis (90 quarter hours), a speech emphasis (60 quarter hours) and a speech-theater emphasis (68 quarter hours). The comprehensive communication program will certify a student to teach speech, journalism, reading and English, or any combination thereof in high

school. The other programs will certify in speech only; the first emphasizes speech communication, the latter speech and theater. For details of these programs, see pp. 52-53 under Education, or contact the Director of the Speech Communication Resource Center, in the Speech Building.

Major in Organizational Communication

This major provides a challenging program of study across the broad spectrum of human communicative behavior, emphasizing both theoretical bases and practical applications. It is designed for those students aiming for professional careers and administrative positions in business, educational, governmental, industrial, labor or other organizational units.

A. Major Course Requirements

InCo 205	4
InCo 210	2
InCo 334	3
InCo 404	3
InCo 442	4
InCo 445	4
InCo 446	4
InCo 498	4
InCo Electives (16 hours minimum)	

B. Requirements Outside the Major

English 308

C. Related Courses and Proficiency Requirements

1. Either of the following:

- a. A statistics requirement of ten hours: Math 113 and Psy 321
- OR

- b. A computer science requirement of ten hours: CS 201 and either CS 202, 251, 252, 254 or 308.

2. Completion of two related areas (minimum of 26 hours in each with at least 15 hours from courses numbered 200 or above) from the following suggested areas:

Behavioral Sciences
Comparative Arts
Government and Political Science
Humanities
Personnel Management and Administration

A list of suggested courses for each of the above areas may be obtained from the School of Interpersonal Communication.

- D. General electives as necessary to complete minimum University requirement of 180 quarter hours for graduation.

SCHOOL OF JOURNALISM

John R. Wilhelm, *Director*

Ralph E. Kliesch, *Associate Director*

Ralph S. Izard, *Assistant Director*

Bachelor of Science in Journalism

The Ohio University School of Journalism is accredited by the American Council on Education for Journalism. It is one of a limited number of accredited schools and departments of journalism in the United States. As such, it is one of the members of the American Association of Schools and Departments of Journalism.

Purpose and Objectives

The purposes of the Ohio University School of Journalism are (1) to provide thorough broadly based *professional* education and training in journalism and communications, leading to the BSJ and advanced degrees; (2) to provide *liberal* and *cultural* background in the arts, literature, languages, social and natural sciences; (3) to promote scholarly research and achievements by the faculty and students; (4) to provide leadership and assistance to high school journalism and to professional associations on state, national and international levels, and (5) to set high standards of journalism ethics.

Journalism today is a profession—like medicine, law, teaching or engineering. It requires its practitioners to be culturally educated and professionally trained. Blending the liberal arts with professional courses, Ohio University journalism students take approximately three-fourths of their courses outside the professional school.

Five sequences are offered, all leading to the bachelor of science in journalism degree: *advertising-management*, *magazine journalism*, *news writing and editing*, *public relations* and *radio-tv news*. Along with these

sequences, several specialized study areas are possible—for example, photojournalism or foreign correspondence.

While working toward their degrees, students may serve on the staff of *The Athens Messenger*, an independently owned daily newspaper. The news editor, managing editor and women's editor are faculty members of the School of Journalism. The student staff members of the *Messenger* gather and write news, edit local and Associated Press copy, write headlines and prepare copy and layouts. This training prepares students to take and hold jobs immediately after graduation.

The School of Journalism has its own Associated Press wire service for the use of students and teachers in all classes.

Practical experience is also available on a laboratory magazine and in graphics and advertising laboratories. Many students also add to their experience by helping edit the *Ohio University Post*, daily campus newspaper or the *Athena*, the University yearbook.

In radio-television news, students get practical experience in preparing and broadcasting news over the University's radio and television stations. The United Press International radio news teletype service is available for journalism students in this sequence.

INTERNSHIP PROGRAM. Consistent with its policy of combining classwork with practical training, the School of Journalism has inaugurated a journalism internship program. Juniors or seniors are eligible for appointment as interns. The period of internship is ten weeks or more during the summer. The intern is provided with as varied experience in practical journalism as possible and is paid a moderate sum for his work and study. No credit will be granted for internship work itself. However, upon completion of the internship period, a student is permitted to enroll the following quarter in Jour 462, Internship, for three hours of credit. The selection of the interns is made by the director of the journalism internship program.

Curricula and Requirements

The American Council on Education for Journalism includes among its "Accrediting Standards" the following provision:

Generally three-fourths of the student's program should consist of courses in the

area of the liberal arts and sciences and one-fourth in professional courses in journalism.

Journalism students at Ohio University meet the above provision largely by fulfilling two sets of requirements: general and specialization area requirements. The first of these provides for a liberal arts and sciences core for all students, as follows:

Public Speaking	1 qtr.
Government	1 qtr.
Sociology or anthropology	1 qtr.
Economics	2 qtrs.
Psychology	1 qtr.
History	3 qtrs.
Foreign language or philosophy	3-qtr. basic sequence
English	4 qtrs.

To this liberal base, which should be the focus of the freshman year, journalism students add courses in a desired area or areas of specialization. This requirement may be filled by completing any one of three options:

1. a minimum of 36 hours in a single department within the College of Arts and Sciences (usually structured in accordance with the major requirements of the selected department),
2. a minimum of 18 approved hours in each of two departments in Arts and Sciences, or
3. a minimum of 18 approved hours in one Arts and Sciences department and 18 approved hours in any other series of related courses.

Additional non-journalism courses may also be required of some students, depending on the journalistic sequence followed. No course may be counted in more than one type of requirement. For example, a course used to meet a general requirement may not be applied to a sequence or specialization area requirement.

To assure the liberal stress of the overall program, the professional content of the BSJ is limited to one-fourth of the 180 hours required for the degree. That is, the credits for all courses taken in journalism, radio-television and photography may not total more than 45 hours. All professional credits beyond 45 must be compensated for by non-professional hours over the required 180-hour total.

Standards

1. Admission to the School of Journalism is formal and includes completion of an application form and a written statement of approximately 500 words indicating why the student is applying.
2. To remain active in the BSJ program, a student must earn at least a C in News Reporting in his sophomore year, pass an English proficiency test and achieve the following minimum averages in journalism course work:
 - a. at 12-15 hours: 2.3
 - b. at 27-30 hours: 2.4
 - c. at 42-45 hours: 2.5

At any time a student fails to meet these standards he is removed from the degree program. Extenuating circumstances may be presented to the director.

Freshman Program

All journalism students must be able to operate a typewriter. Students without this proficiency must make special arrangements for typing instruction before they may enroll in Jour 231.

Students preparing for advertising-management will find it advantageous to take Econ 101 and 102, Principles of Economics (8) in their freshman year.

All prospective journalism majors are advised to take two quarters of English during the freshman year.

Journalism Sequences

All journalism majors complete a basic 13-hour core of three courses. These are: Jour 231, News Reporting (4), Jour 333, News Editing (4), Jour 411, Newspaper and Communications Law (3) and Jour 412, Mass Media and Society (2).

Students must earn a C or better in Jour 231 to continue as journalism majors and to continue in journalism core courses.

An English proficiency test is part of the course requirements of Jour 231. Passing score for this test is 75. Students who do not pass this exam in Jour 231 must pass it

before graduating, and passing scores on re-takes for the exam are 75 if the exam is taken as a sophomore, 80 for juniors and 85 for seniors.

Jour 105, Introduction to Journalism and Mass Communication, a freshman course, is optional but recommended for all entering journalism.

The additional requirements for the various sequences are as follows:

Advertising	
Jour 221	5
Jour 250	5
Jour 321	4
Jour 323	2
or Jour 462	3
Jour 450	3
or Jour 482	4
Journalism electives to make 42-45 hours	

Management	
Jour 250	5
Jour 321	4
Jour 323	2
or Jour 462	3
Jour 481	3
Journalism electives to make 42-45 hours	
Acct 101	5
Acct 102	4
BusL 355	4
Psy 361	5

Public Relations	
Jour 221	5
Jour 331	3
Jour 334	2
or Jour 462	3
Jour 431	3
Jour 471	5
Jour 472	4
Journalism electives to make 42-45 hours	
Soc 310, 311, 412, 413 or 414	4
Psy 361	5

Magazine	
Jour 221 or 311	5
Jour 332	2
or Jour 462	3
Jour 441	4
Jour 442, 363 or 431	3
Journalism electives to make 42-45 hours	
Eng 309	5

News Writing and Editing	
Jour 221	5
Jour 311	5
Jour 331	3
Jour 464 or 465	3
Jour 332 and 334	2 and 2
or Jour 462	3
Journalism electives to make 42-45 hours	

Radio-TV News

Jour 351	3
Jour 353	2
or Jour 462	3
Jour 452	3
R-TV 106	4
R-TV 121	4
R-TV 310	4
Journalism electives to make 42-45 hours	

Juniors with a 3.0 accumulative average in journalism and 2.5 accumulative average in all work may elect a sequence making up their own program in journalism including the basic core of four courses, with approval of their adviser and the director. This is known as the Carr V. Van Anda Program.

SCHOOL OF RADIO-TELEVISION

Roderick D. Rightmire, *Director*

The School of Radio-Television offers programs of study leading to bachelor's, master's and doctoral degrees. The baccalaureate program is a professional degree program and is designed to prepare students for meaningful careers in all aspects of radio and television. Areas given special attention are management, production and performance, writing and advertising, educational uses of media, programming and film and broadcast journalism. The work of an experienced and diverse faculty is supplemented by an extensive program of guest lecturers from leading industry organizations.

The classroom and laboratory experiences of the students are augmented by practical on-the-air experience using three University owned and operated stations: WOUB-AM, WOUB-FM and WOUB-TV. A large part of the operation of these stations is conducted by students in radio-television. Additionally, experimental broadcasts of dramatic material are produced jointly by students in radio-television and theater.

Talent scholarships of approximately \$600 per year, and renewable for four years, are available to high school seniors. These are based primarily on demonstrated talent in the field of radio-television.

In addition, the following awards are available in radio-television:

1. The Jesse Zousmer Foundation, created in memoriam to an Ohio University

alumnus who was head of ABC Network News until his untimely death returning from Vietnam, provides funds for faculty and student documentary and public affairs productions.

2. The Richard Linke scholarship has recently been established to assist students in radio-television or related areas of the College of Communication.

3. Each year Ohio University participates in the James D. Shouse awards, presented by the AVCO Broadcasting Company, which provides a plaque and a monetary award to the outstanding senior in radio-television.

4. There is a student group affiliation with the Columbus Chapter of the National Academy of Television Arts and Sciences.

5. Affiliation with National Educational Television, the National Association of Educational Broadcasters, the International Radio and Television Society, the Ohio Association of Broadcasters and the Association for Professional Broadcast Education provides opportunities for contacts and broad development in the broadcasting field.

Summary of Requirements for Major in Radio-Television

REQUIRED COURSES IN RADIO-TELEVISION

R-TV 106	4
R-TV 121	4
R-TV 208	4
R-TV 311	4
R-TV 316	4
R-TV 330	4
R-TV 370	4
R-TV 479	4
Three of the following courses	12
R-TV 450 (4); R-TV 451 (4); R-TV 453 (4); R-TV 455 (4); R-TV 457 (4); R-TV 459 (4); R-TV 467 (4).	

REQUIREMENTS OUTSIDE THE MAJOR

1. Arts and humanities—35 quarter hours, including at least one multi-course sequence. At least one five-hour course in

English composition is required. With approval of the adviser, courses may be elected in the following departments: classical languages, comparative arts, English, great books, modern languages, philosophy.

2. Social sciences—35 quarter hours, including at least one multi-course sequence. With approval of the adviser, courses may be elected in the following departments: anthropology, economics, government, history, international studies, journalism, management, marketing, psychology or sociology.

3. Mathematics and natural sciences—Three courses, of which at least two must be in sequence. With approval of the adviser, courses may be elected in the following departments: astronomy, biology, botany, chemistry, computer science, geology, mathematics, physical science, physics or zoology.

In addition to these requirements, students are expected to demonstrate proficiency in voice and articulation, typing and basic language skills.

A freshman course, R-TV 105, Introduction to Mass Communication, is recommended to entering students.

Major in Radio-Television

The sequence of courses presented below is only a sample of the pattern by which a student might meet the requirements for a major in radio-television. It should *not* be interpreted as the specific order in which requirements must be met.

Freshmen

InCo 103 ...4	Eng5	Elective3
Hum Req ...4	or 1214	or 1064
Hum Req ...4	Hum Req ...4	Hum Req ...4
SSc Req ...4	SSc Req4	SSc Req4

Sophomore

R-TV 208 ...4	R-TV 311 ...4	R-TV 317 ...4
Math-PSc	Math-PSc	Math-PSc
Req4	Req4	Req4
Hum Req ...4	Hum Req ...4	Hum Req ...4
Elective4	Elective4	Elective4

Junior

R-TV 370 ...4	Major	Major
Major	course* ...4	course* ...4
course* ...4	Hum Req ...4	Hum Req ...4
Hum Req ...4	SSc Req4	SSc Req4
SSc Req ...4	Elective4	Elective4

Senior

R-TV 479 ...4	SSc Req4	SSc Req4
SSc Req ...4	Electives ...12	Electives ...12
Electives8		

*See choices in major within list of requirements.

The College of Education

Gilford W. Crowell, *Dean*

Russell A. Milliken, *Associate Dean*

Dale F. Nitzschke, *Associate Dean*

Fred B. Dressel, *Assistant Dean*

The College of Education is devoted to the education of men and women who intend to enter the fields of teaching and educational administration. A wide range of programs prepares students for teaching in elementary schools, high schools and colleges; for positions as supervisors, school principals or superintendents, and for specialized educational work as guidance counselors.

All these programs include a broad base of general education, intensive preparation in the subjects to be taught and professional emphasis and focus which combine educational theory with actual practice in meeting the responsibilities of the profession. Each program is thus designed to prepare students to enter the profession possessing the liberal background, functional knowledge and professional understanding and skill which are required for professional success.

The College of Education is accredited by the North Central Association, the National Council for Accreditation of Teacher Education and is approved for teacher training by the State Department of Education of Ohio.

BACHELOR OF SCIENCE IN EDUCATION

The degree, bachelor of science in education, represents the completion of a program designed to develop in the student competence in three areas: the broad awareness of the principal academic fields developed through a true university education; the deeper study of the particular areas in which the student seeks the undergraduate

mastery necessary for teaching these subjects, and the understanding of the professional responsibilities of teaching and demonstrated skill in meeting them.

The degree is granted upon completion of the general graduation requirements of the University, including a minimum of 180 quarter hours with a point-hour ratio of 2.0 (C) on all hours attempted, but including only the final hours and points in repeated courses, and in addition a 2.0 point-hour ratio in the major teaching field.

A student who plans to teach in the elementary grades registers in the College of Education when he has completed the requirements of University College. The curricula offered by the College of Education include the requirements of the State Department of Education and qualify a student to obtain a provisional certificate to teach in the elementary grades or kindergarten-primary grades, depending upon the student's preparation.

Students who plan to teach high school academic or special subjects ordinarily enroll in the College of Education. The curricula of the College of Education include the requirements of the State Department of Education, and qualify the student to obtain a provisional certificate to teach the subjects indicated on the certificate.

Selective Admission and Retention

There are three distinct steps or admission phases in the admission and retention program.

Admission to Teacher Education

Application for admission to teacher education should be made during the third quarter of the freshman year. The criteria students must meet by the end of the quarter in which they apply are:

1. Completion of 45 quarter hours of credit,
2. Completion of Psy 101,
3. Sufficient grade point average to be above probationary status.

Applications for admission to teacher education may be obtained in the Student Personnel Services Office, McCracken Hall.

Admission to Junior Standing

Application for admission to junior standing in teacher education should be made at the end of the third quarter of the sophomore year. Criteria should be met by the end of the quarter in which the student applies.

1. Criteria that must be met by students in teacher education:
 - (a) Completion of 90 quarter hours of credit.
 - (b) Completion of Psy 375.
 - (c) Satisfactorily meeting the speech proficiency requirement.
The student must have successfully passed a speech proficiency test given by the Speech and Hearing Clinic.
 - (d) Attainment of a 2.0 accumulative point-hour ratio.
 - (e) A satisfactory report from the Health Center.
 - (f) A satisfactory report from the academic adviser.
 - (g) A satisfactory report from Student Records Office.
2. Special criteria for students in elementary education:
Completion of EdEl 200.
3. Special criteria for students in secondary education:
 - (a) Completion of EdSe 250.
 - (b) Achievement of a 2.0 accumulative point-hour ratio in each of the declared teaching fields.
 - (c) Adequate progress toward completion of the 45 quarter hours of general education required by the state certification law.

4. Special criteria for students in special education:

- (a) All students except those in speech and hearing therapy must complete EdSp 271, 272, 373.
- (b) Plan E, completion of EdEl 200 or Psy 373 or HECF 160 or 310.
- (c) Plan S, completion of EdSE 250.
- (d) Speech and hearing therapy majors must complete EdSp 271 or Psy 475.

ELEMENTARY EDUCATION

General Education

To be certified as an elementary school teacher in the State of Ohio a student must select the designated number of credit hours from courses in the following areas:

Arts and Crafts—6 quarter hours (Art 360 will fulfill this requirement).

English—18 quarter hours (InCo 101, Children's Literature-EdEl 321, and Eng 305 included).

Health and Physical Education—6 quarter hours (HPER 202 and 270).

Mathematics—9 quarter hours (Math 120 recommended, [prerequisite high school algebra and plane geometry] but math courses carrying higher numbers may be taken by students who can meet the prerequisites).

Music—6 quarter hours (Mus 160 and 161, Fundamentals).

Educational Psychology—5 quarter hours (Psy 375, Educational, plus prerequisite, Psy 101).

Science—12 quarter hours with at least one course in the physical sciences and one in the biological sciences required. Physical World 101 and Bot 101 or Zool 101 are suggested. Other courses may be selected from physical sciences, biological sciences or earth sciences. (Geology is acceptable as a physical science but geography is not. Physical World recommended for upper elementary teachers.)

Social Science—27 quarter hours from anthropology, economics, economic education, geography, government, history and sociology. A basic course in either

American government or U.S. history must be included. 12 quarter hours of social science, including Geog 121 (Cultural Geography), are prerequisites for EdEl 350.

Professional Sequence

The following professional courses are required of all elementary education majors. To be eligible to enroll in these courses students should note the prerequisites in the course description section of this catalog.

EdEl 200	4
EdEl 310	6
EdEl 321	4
EdEl 330	4
EdEl 340	4
EdEl 350	4
EdEl 460	4
EdPl 360	2
EdPl 461	6
EdPl 462	6
EdPl 465	3

Plans A, B and C

Each elementary education major is assigned to a given plan to help assure him of getting the professional courses when he needs them in relationship to the quarter designated for student teaching. Plans A and B are assigned to regular students while Plan C is reserved for transfer students and those who enter elementary education late. (Plan sheets are available in the office of the Department of Elementary Education, 202 McCracken Hall.)

Kindergarten-Primary Sequence. Students seeking kindergarten-primary certification should elect the courses listed above for the professional sequence and, in addition, EdEl 304 (3 hours) and EdEl 305 (3 hours), the two specialized courses in theory, materials and methods of kindergarten-primary education. Also, student teaching must be done on the kindergarten-primary level.

20-Hour Concentration. In addition to the general requirements, all elementary education majors are required to have at least 20 quarter hours of concentration in one field from any department in the University outside the College of Education, but including the School of Home Economics and School of Health, Physical Education and Recreation.

SECONDARY EDUCATION

Academic and Special

A junior or senior who has a 3.0 accumulative grade point average and is able to schedule 15 to 18 hours of independent study in the department may be eligible for departmental honors recognition. Honors work extends beyond the required teacher-education course sequences.

The following are the general requirements for all students in the College of Education who plan to teach in the secondary school.

Professional Requirements (37-40 hours):

Psy 375	5
EdSe 250	4
EdPl 360 or EdPl 361	2
EdSe 351	5
Methods in major field	3-6
EdPl 463-464 (EdPl 461 may be substituted for EdPl 464 where appropriate)	12
EdPl 465	3
EdSe 480 (after student teaching)	3

General Education

Physical Education: 3

Students must complete a total of 45 quarter hours of general education. These 45 quarter hours must be distributed so as to include at least two courses in each of the following fields:

1. Science and mathematics (one course in each)
2. Comparative arts and/or philosophy
3. Social science
Psy 101 is required
4. English, and/or foreign language
InCo 103 is required unless waived on basis of a high school speech course

If the major subject is the same as one of the above fields, then ten quarter hours of the major may be counted towards the corresponding general education field as well as the major.

Major Requirements

ART EDUCATION: 82

A. Select at least 45 quarter hours in studio courses including at least one course from each of the following areas:

1. Two-dimensional art
2. Three-dimensional art
3. Graphic communication

Education

B. Select 27 quarter hours of art history and/or comparative arts *except* CA 303, 304, 305, History of Oratory and CA 321, 322, 323, History of Music.

C. Select at least ten quarter hours of electives in art and/or art history.

BOOKKEEPING-BASIC BUSINESS: 68

Acct 101 and 102-Managerial	9
Acct 303-Act Prin and Procd.	4
BLaw 355, 356-Legal Env. of Bus.	8
Econ 101 and 102-Prin	8
Geog 332-Econ	4
Jour 250-Adv Prin	5
Mkt 301 and 302-Basic	8
Mkt 458-Sales Mgt OR	
Mkt 444-Consumer Behavior	3-4
Fin 323-Money Banking and Econ Activity ..	4
Mgt 300-Mgt	4
BIC 220	3
CS 252-Intro to Dig Comp	5
Programming for Bus	
Business elective	3

COMMUNICATIONS

COMPREHENSIVE-OPTION ONE

(SPEECH EMPHASIS): 94

1. Speech (41 hours)

A. Fundamental Processes

*InCo 101-Speech Fund	3
*InCo 445-Comm in Organ	4
And six quarter hours of elec selected from:	
InCo 107-Intro to Verbal	
Lang Behav	3
InCo 335-Bases of Speech Comm	3
InCo 104-Listening	2
InCo 433-Applic of Gen	
Semantics	4
InCo 488-Cross-cultural Comm	4

B. Theory and History of Speech

*InCo 334-Intro to Comm Process	3
*InCo 353A, or B or C-Hist and Crit of Oratory	3
And nine quarter hours of elec selected from:	
InCo 217-Forensic Workshop	1-6
InCo 425-Directing the Foren Program	3
InCo 435-Theories of Argument	3
InCo 442-Comm and Persuasion	4
InCo 446-Comm and the Campaign	4
InCo 452-Psych of Speech	4
InCo 450-Intro to Canonical Rhetoric	3

InCo 458-Responsibilities and Freedom of Sp	4
InCo 460-Contemp Public Address	4
InCo 481-Measurement of Sp Comm ..	4
R-TV 370-Broadcasting and the Public	4
R-TV 441-Instruct Methods in Educ TV	4
ThAr 215-Principles of Acting	3
ThAr 370 or 371 or 372	
Theater Hist	3
ThAr 460-Directing I	3

C. Forms of Speech

*InCo 105 or R-TV 105 or Jour 105-Intro to Comm	4
*InCo OR ThAr 220-Oral Interp of Lit	3
And 16 hours select from at least 3 of the 6 areas:	
<i>Platform Speaking</i>	
InCo 103-Public Speaking	4
InCo 412-Advanced Public Spkg	4
<i>Discussion</i>	
InCo 205-Group Discussion	4
InCo 210-Parliamentary Proc	2
InCo 404-Interviewing	3
InCo 405-Conference Leadership	4
<i>Debate</i>	
InCo 215-Argumentation and Debate	3
<i>Acting</i>	
ThAr 415-Practicum in Acting	4
ThAr 441-Creative Dramatics	3
<i>Playdirecting</i>	
ThAr 465-Practicum in Directing	1-4
<i>Technical Theater</i>	
ThAr 405-Practicum in Management	1-4
ThAr 434-Practicum in Production Design	1-4

*Required

2. English (30 hours)

Freshman English	5
Eng 201, 202, 203	5
Eng 301, 302, 303, 304, 311, 312, 313, 314, 411, 412, 413, 414..	5
Eng 317, 321, 322, 417, 421, 422	5
Hum 107, 108, 109, 307, 308, 309, Eng 204, 205, 206, 306, 341, 441, or courses in foreign lit. in translation (e.g. ML 335-339)	5
Eng. elec. including any course from the list above not taken to meet the minimum re- quirement, or other Eng. courses ..	5

3. Journalism (14 hours)

Jour 231-Basic Newswriting	4
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Jour 221-Graphics	5	4. Reading (9 hours)	
or		EdEl 411-Diagnosis and Treat of	
Jour 331-Rept Contemp Issues	3	Read Disab	4
or		EdSc 420-Tchg Read in Jr and	
Jour 441-Magazine Feature Writing	4	Sr HS	5
Jour 333-Editing	3		
Jour 484-Supervising School and		ENGLISH COMPREHENSIVE: 67	
College Public	4	Freshman English	5
4. Reading (9 hours)		Eng 201 OR H297-Interp Fict	5
EdEl 411-Diagnosis and Treat of		OR	
Read Disabilities	4	Eng 202 OR H298-Interp of Poetry	5
EdSc 420-Tchg Read in the Jr and		OR	
Sr HS	5		

COMMUNICATIONS
COMPREHENSIVE-OPTION TWO
(ENGLISH EMPHASIS): 90

[illegible]

Education

Marriage and the Family: 19	
HECF 270-Family Living	3
HECF 371-Family Develop	3
HECF 471-Family Life Educ	4
HECF 462-Read in Child Devp and/or Family Living	6
HECF 360-Human Sexuality	3
Household Management: 12	
Select 12 hrs from the following:	
HEFN 122-Food Science and Princ	4
HEHM 395-Home Mgmt	3
HEHM 180-Furnishing Today's Home	3
HEHM 384-Family Housing	3
HETC 317-Textiles and Dress Mod Liv	3
Consumer Economics: 7	
HEHM 390-Family Con. Econ	3
EcEd 447-Econ Anal	4
Select 12 qtr hours from any one or combination of the above fields	12

GENERAL SPEECH-OPTION ONE (INCO EMPHASIS): 60

1. Fundamental Processes-(13 hours)	
*InCo 101-Speech Fund	3
*InCo 445-Comm in Organ	4
And 6 qtr hrs of elec selected from:	
InCo 104-Listening	2
InCo 107-Intro to Verbal Lang Behav	3
InCo 335-Bases of Sp Comm	3
InCo 433-Applic of Gen Semantics	4
InCo 448-Cross-cultural Comm	4
2. Theory and History of Speech (23 hours)	
*InCo 334-Intro to Comm Process	3
*InCo 353A, B or C Hist and Crit of Oratory	3
And 17 qtr hrs of elect from:	
InCo 217-Forensic Workshop	1-6
InCo 425-Directing the Forensics Program	1-6
InCo 435-Theories of Argument	3
InCo 442-Comm and Persuasion	4
InCo 446-Comm and the Campaign	4
InCo 450-Intro to Canonical Rhetoric	3
InCo 452-Psych of Speech	4
InCo 458-Respons and Freedom of Speech	4
InCo 460-Contemporary Public Address	4
InCo 481-Measurement of Speech Comm	4
R-TV 370-Broadcasting and the Public ...	4
R-TV 441-Instructional Methods in Educ TV	4
ThAr 215-Principles of Acting	3
ThAr 370 OR 371 OR 372- Theater History	3
ThAr 460-Directing I	3

3. Forms of Speech (24 hours)	
*InCo, R-TV, Jour 105- Intro to Com	4
*InCo or ThAr 220-Oral Interp of Lit	3
And 17 qtr hrs of elec from 3 of the 6 areas:	
<i>Platform Speaking</i>	
InCo 103-Public Speaking	4
InCo 412-Advanced Public Speaking ...	4
<i>Discussion</i>	
InCo 205-Group Discussion	4
InCo 210-Parliamentary Proc	2
InCo 404-Interviewing	3
InCo 405-Conference Leadership	4
<i>Debate</i>	
InCo 215-Argumentation and Debate ...	3
<i>Acting</i>	
ThAr 415-Practicum in Acting	4
ThAr 441-Creative Dramatics	3
<i>Playdirecting</i>	
ThAr 465-Practicum in Directing	1-4
<i>Technical Theater</i>	
ThAr 405-Practicum in Mgt	1-4
ThAr 434-Practicum in Prod Design ...	1-4
*Required	

GENERAL SPEECH-OPTION TWO (THEATER EMPHASIS): 69

ThAr 115-A-Voice	2
ThAr 115-B-Voice	2
ThAr 115-C-Voice	2
ThAr 116-A-Body	2
ThAr 116-B-Body	2
ThAr 116-C-Body	2
ThAr 130-A-Technical Prod: Scenery	3
ThAr 130-B-Technical Prod: Lighting	3
ThAr 130-C-Technical Prod: Costume	3
ThAr 215-Principles of Acting	3
ThAr 220-Oral Interpretation	3
ThAr 337-Basic Makeup	1
ThAr 340-Dramatic Lit Children	3
ThAr 370-History: Prehistoric	3
ThAr 371-History: Medieval	3
ThAr 372-History: Ren. to Mod	3
ThAr 434-Practicum, Prod Design	1
ThAr 440-Children's Theater	3
ThAr 441-Creative Dramatics	3
ThAr 460-Directing I: Principles	3
ThAr 461-Directing II: Practical	3
ThAr 541-Advanced Creative Drm	4
ThAr 525-Practicum Schl Thtr	1
InCo 103-Public Speaking	4
InCo 334-Intro to Comm Process	3
One course from R-TV 310, 370, 440, 441	4

HISTORY-MODULAR SOCIAL STUDIES PROGRAMS: 78

A. History: 48	
Hist 101, 102, 103-West Civ	12

Hist 211, 212, 213-U.S. Hist 12
Six hrs in each of the following fields:

European History 6
U.S. History 6

Hist 111-Origins of West Civ OR .. .
Anc-Med Hist* 4-6

Other (African, Asian, Latin
American, Middle East) 6

12 of the above 24 hrs must be at
400 level

*If necessary, select sufficient
elect in history to bring total to
48 hrs.

Arts and Sciences students must take
an ancient history or medieval
history sequence for 6 hrs.

B. Select one of the following fields and
complete at least 30 qtr hrs in that
field:

1. Government: 30

a. Govt 101 and 102

b. Choose one course from each of
the following:

1. Govt 311, 332, 333, 334A or
B, 335, 341, 432, 438, 445, 446,
447A or B

2. Govt 401, 402, 409, 413

3. Govt 304, 306

4. Govt 303, 305

5. Govt 350

6. Choose one of the following:
Govt 405, 406, 408, 471.

c. Choose enough electives in gov-
ernment to bring the total number
of hrs earned in that field to 30.

2. Economics: 30

a. Econ 101 and 102 (or 301 and 302).

b. Econ 303 and 304

c. Select sufficient hrs from the fol-
lowing listing to complete 30 hrs
of economics:

Econ 340, 415, 425 OR 426 OR
429, 480, EcEd 446.

3. Social Psychology: 30

a. Required courses:

Psy 404, 436, 433, 321, 326.

b. Select five (5) hrs from the following:
Psy 490F or 410 or any 2 of the
following:

Psy 490B, 490C, 490D, 490E.

4. Geography: 30

a. Required courses:

Geog 101, 121, 130, 235, 260.

b. Select two (2) electives in regional
geography so as to include one
course in the Western region and
one in the non-Western region.

c. Select two (2) elective courses in
upper level systematic geography.

5. Sociology and Anthropology: 30

a. Soc 101 or 302

b. Anth 270 or 370

c. Select sufficient elect in both fields
to complete 30 hrs including 8 hrs
at the 400 level.

INDUSTRIAL ARTS

COMPREHENSIVE: 100

IT 115-Metal Fabri 4

IT 216-Metal Mach 4

IT 220-Small Engns 3

IT 244-Graphic Proc 5

IT 250-Wood Industry 5

IT 270-Rep Writing 1

IT 301-Ceramic Prod 3

IT 308-Plastics 3

IT 310-Metal Castg 3

IT 320-Hydraulic Controls 3

IT 332-Electronics 5

IT 361 Product Dsgn 2

IT 390-Materials 3

EG 101 and 102-Engineer Drawing 6

IT and EG technical electives: 25

(concentrated in 2 flds)

Chemistry, physics and mathematics (Min of
one course in each fld) 25

LATIN: 39-51

(Needs second teaching field)

Lat 101, 102, 103-Basic 12

39 hours above Latin 103 39

including Lat 401 and 433, one other 400
level course.

Students entering with 3 or 4 yrs of high
school Latin will normally register for
Lat 351 and then must complete at least
30 quarter hours including 401, 433 and
one other 400 level course.

MATHEMATICS: 60

A. Select at least 50 quarter hours* of mathe-
matics at the 200 level or above excluding Math
320 and 420 but including at least 12 quarter
hours of analytic geometry and calculus. A maxi-
mum of 10 quarter hours of computer science at
the 200 level or above may be included in this
50 quarter hour block.

B. 10 quarter hours additional are required
and may be selected from any one or combina-
tions of the following:

1. Mathematics at the 200 level or above
excluding Math 320 and 420

2. Computer Science at the 200 level or
above

3. Ast 300, 301, 350

4. CE 220, 321

5. Phys 251-252

6. Phil 320, 420, 421

*For students enrolled in the College of Arts and Sciences
this 50 quarter hour block must include at least 9 quarter
hours of mathematics at the 400 level.

Education

MODERN LANGUAGES COMPREHENSIVE: 56-68

Lang 111, 112, 113*-Basic	12
All students must have 56 hours above Lang 113.	
Lang 211, 212 and 241-Inter	12
Lang 341, 342 and 343-Adv Conv and Comp	12
Lang 348 OR 349-Civ and Culture	3
Lang 355 and 356-Lit Readings	8
Lang 410-Lang Lab	3
Lang 437-Phonetics	3
Lang 449 OR 441-Stylistics	3
Electives at 400 level or above	9
Select 3 hours from the following:	3
Cultural Anthropology	
Cult and Civ of Country	
History of Country	
Linguistics	
Study Abroad (in the country)	

(Study Abroad Recommended)

* 1 yr. or less H.S.—start Lang 111
2 or 3 yrs H.S.—start Lang 211
4 or more yrs. H.S.—start Lang 241

MUSIC EDUCATION WITH INSTRUMENTAL EMPHASIS: 111

Applied Music (22 hrs in prin instr)	22
Applied Music: Second Instr-Piano or	6
sufficient prof to pass Prof Test-See School of Music.	
Mus 147, 148 and 149-Voice Class	3
Major Performing Groups (Minimum one per quarter)	11
Mus 90 (to be taken each quarter)	0
Mus 101, 102, 103-Theory	9
Mus 201, 202, 203-Harmony	9
Mus 204 and 205-Dict and SS	6
Mus 206-Form and Anal	3
Mus 261-String Meth and Mat (3 qtr, 2 hr ea)	6
Mus 263-Wind and Perc Meth	12
Mus 304-Instrumentation	3
Mus 321, 322, 323	9
Mus 364-Sec Schl Voc	3
Mus 455 and 457-Cond	6
Mus 401-Keybrd Harm	3

MUSIC EDUCATION WITH VOCAL EMPHASIS: 109

Applied Music:	22
("Principal instrument" voice or piano)	
If major is piano then must take Mus 451, 452, 453-Accm	
3	
Secondary Instrument: (voice or piano sufficient to pass prof test-See School of Music)	6

Major Performing Groups (minimum one per quarter)	11
Mus 90 (to be taken each quarter)	0
Mus 101, 102, 103-Theory	9
Mus 201, 202, 203-Harmony	9
Mus 204 and 205-Dict and SS	6
Mus 206-Form and Anal	3
Mus 261-String Meth	4
(2 qtr., 2 hr ea)	
Mus 263-Wind and Perc	6
(3 qtr, 2 hr ea)	
Mus 304-Instrumentation	3
Mus 321, 322, 323-Hist of Mus	9
Mus 455 and 456-Cond	6
Mus 364 and 365-Sec Schl Vocal Tech	6
Mus 401-Keybrd Harm	3
Mus 468-Gen Mus in Jr HS	3

SCIENCE MODULAR PROGRAM

Students wishing to major in science must choose one of the following combinations:

- A. Possible combinations with required tools:
 1. Biology-Physics: 99
Biology-35
Physics-31
Tools-33 Chem 121, 122, 123-13
Math 263A, 263B, 263C, 340-20
 2. Biology-General Science: 80
Biology-35
General Science-15 (Earth Science)
Tools-30 Chem 121, 122, 123-13
Phys 201, 202, 203 seq.-12
Math (113 or above)-5
 3. Biology-Earth Science: 89
Biology-35
Earth Science-33
Tools-21 Phys 201, 202-8
Chem 121, 122, 123-13
 4. Biology-Chemistry: 86
Biology-35
Chemistry-33
Tools-18 Math 263A and B-10
Phys 201, 202-8
Recommend Math 263C-5 and Phys 203-4
 5. Chemistry-General Science: 90
Chemistry-33
General Science-30
Tools-27 Phys 201, 202, 203-12
Math 263A, B, C-15
 6. Earth Science-Chemistry: 89
Earth Science-33
Chemistry-33
Tools-23 Math 263A and B-10
Phys 201, 202-8
Biology 101-5
Recommend Phys 203-4
 7. Earth Science-Physics: 93
Earth Science-33
Physics-31

Tools-29 Math 263A, B, C and Math 340-20
Chem 121, 122-9
Recommend Chem 123-4

8. Earth Science-General Science: 78-85
Earth Science-38
General Science-15 (Biological Science)

Tools-25-32 Phys 201, 202, 203-12
Chem 121, 122, 123 seq-13

Math through Trig in either HS or College-7

9. Physics and Chemistry: 84
Physics-31
Chemistry-33

Tools-20 Math 263A, B, C and Math 340-20

10. Physics and General Science: 94
Physics-31
General Science-30

Tools-33 Math 263A, B, C and Math 340-20
Chem 121, 122, 123 seq-13

B. Area and Course Requirements:

1. Biology: 35
Bot 101 or Zool 101,
Bot 102, Zool 203
Bot 424-Plant Phys
Zool 325-Gen Genetics
Zool 460-Animal Phys
Zool 475-Animal Ecology

2. Chemistry: 33
Chem 121, 142, 143-General
Chem 301 AND 302-Organic
OR
Chem 305, 306, 307
Chem 303 AND 304-Org Lab
OR
Chem 308 AND 309
Chem 325 OR 484 AND 485
Chem 351-Physical Chem

3. Earth Science: 33
Geog 211-Meteorology
Astr 300-Elem Astron
Geol 101, 102, 103-Elem of Geol
Select one course from three of the following
four areas:
a. Geol 310-Rocks and Min
b. Geol 330 OR 331-Geomorph
c. Geol 342 OR 340-Paleon
d. Geol 401-Oceanography

4. General Science: 45
a. Physical Science: 15
(Select a combination of physics AND
chemistry to total at least 15 qtr hrs)
b. Biological Science: 15
Biol 101, 102, 103
c. Earth Science: 15
Geol 101, 102, 103
Select either Geog 211 or Astr 300.

5. Physics: 31
Intro Phys 201, 202, 203, 305, 306
OR
General Phys 251, 252, 253, 306
Physics elect: 14
Select any of the 300 or 400 level courses
in physics for which prerequisites have
been met.

SOCIAL STUDIES COMPREHENSIVE: 90

- A. History: 36
1. Select two of the following:
Hist 101, 102, 103-West Civ 8
 2. Select two of the following:
Hist 211, 212, 213-U.S. Hist 8
Select 6-9 qtr hrs in either U.S. or
Modern European history at 300 level or
above (Ohio history is recommended) .. 6-9
 4. Select 9-12 qtr hrs of non-U.S.,
non-Modern European history 9-12
- B. Select a minimum of 18 qtr hrs in ONE
of the following fields AND a minimum
of 8 qtr hrs in each of the other fields:
1. Government:
Govt 101* and 102*-Am Nat'l
Select any 10 addtl qtr hrs to fulfill
18 hr fld
 2. Economics:
Econ 101* and 102* OR 301* and
302*
Elect any 10 additional qtr hrs from
the following list to fulfill 18 hr field:
Econ 303, 304, 323, 340, 425, 426,
429, 415, 480, EcEd 446.
 3. Geography:
Geog 101*, 121*, 130*
Select one elective in regional geog-
raphy and one elective in upper level
systematic geography and any needed
electives.
 4. Sociology:
Soc 101* or 302*
Soc elec including one course at the
400 level to complete 18 hr fld (select
one course to complete 8 hr fld)*
 5. Anthropology:
Anth 270* or 370*
Anth elec including one course at the
400 level to complete 18 hr fld (select
one course to complete 8 hr fld)*
- C. Select elect in any one or combinations
of the above flds to bring total qtr hrs
to 90.

*Courses required in 8 qtr hr minimum choice.

SPECIAL EDUCATION

Four professional preparation programs are available to prospective teachers of exceptional children. These are teachers of (1) educable mentally retarded children, (2) trainable mentally retarded children, (3) children with learning and behavior disorders and (4) speech and hearing therapy.

EDUCABLE MENTALLY RETARDED CHILDREN

In order to earn a bachelor of education degree in special education, a student must select the designated number of credit hours from a selected group of courses. Two degree programs, Plan E for students planning to teach educable mentally retarded children at the elementary level and Plan S for students planning to teach such children at the secondary level, are outlined below. Each of the two plans meet the University requirements for graduation and the Ohio State Department of Education teacher certification requirements in the area of educable mental retardation.

PLAN E (Elementary Level)

General Requirements

	Hrs Req
General Education:	
InCo 101	3
Physical Education	3
Humanities	8
Natural Sciences	8
Social Sciences	8
Psychology	
Psy 101	5
Psy 375	5
Elect 8 additional hours*	8
(See below)	
English	
One course in 170 or 180 series	5
Speech Pathology	
HSS 108 or HSS 336	3
Mathematics	Hrs Req
Math 120 recommended	5
Music	
Mus 160	3
Mus 161	3

Arts and Crafts	
Art 360	6
Physical Education	
HPER 202	4
HPER 435 or HPER 250 or HPER 333	4-5
Audio-Visual	
EdAv 480	4
Requirements in Major	
Cognate Areas	
Psy 373	
or	
EdEl 200 or 300 or HECF 160 or 360	4-5
EdEl 310	6
EdEl 460	4
Special Education	
EdSp 271	3
EdSp 272	3
EdSp 373	3
EdSp 374	5
EdSp 376	5
EdSp 377	3
EdSp 470	3
Elect 2 additional courses**	6
Professional Laboratory Experiences	
EdPl 360 or 361	2
EdPl 461-462	12
EdPl 465	3
Minor***	20
See below****	

PLAN S (Secondary Level)

General Requirements

	Hrs Req
General Education	
InCo 101	3
Physical Education	3
Humanities	8
Natural Sciences	8
Social Sciences	8
Psychology	
Psy 101	5
Psy 375	5
Elect 8 additional hours*	8
English	
One course in 170 or 180 series	5
Speech Pathology	
HSS 108 or HSS 330	3
Physical Education	
HPER 202	4
HPER 435 or HPER 333 or HPER 250	4-5
Mathematics	
Math 120 recommended	5
Audio-Visual	
EdAv 480	4

Requirements in Major

Cognate Areas

Psy 373 or EdEl 200 or 300 or
HECF 160 or 360 4-5

Secondary Education

Select two of three following courses

EdSe 250, or EdSe 351, or
EdSe 480 7-9

Special Education

EdSp 271 3
EdSp 272 3
EdSp 373 3
EdSp 374 5
EdSp 376 5
EdSp 377 3
EdSp 470 3
Elect two additional courses** 6

Professional Laboratory Experiences

EdPl 360 or 361 2
EdPl 461-462 12
EdPl 465 3
Minor*** 20

*Psychology—8 quarter hours, suggested are:

Psy 331 4
Psy 341 5
Psy 404 5
Psy 410 5
Psy 412 5
Psy 415 5
Psy 436 5
Psy 444 5

**Special Education—6 quarter hours; elect from any non-required EdSp course:

EdSp 370, EdSp 371, EdSp 378, EdSp 379, EdSp 474,
EdSp 475, EdSp 477.

***Minor Area of Concentration: 20 quarter hours in one or two related areas, within a college, to be selected with guidance of adviser, from any college within the University, outside the College of Education, but including the schools of home economics and physical education. Upon selection of two areas, the hours selected in one area could range from seven to 13 quarter hours with the balance of the 20 hours to be taken in the second area.

****In order for a student on Plan E to shift into the elementary program without undue hardship, it is recommended that the sequence in science, an additional course in English and 27 hours of social studies be taken.

VALIDATION OF ELEMENTARY AND SECONDARY CERTIFICATE

Students not majoring in special education who desire to validate the standard elementary or secondary certificate for teaching educable mentally retarded children in Ohio should complete the following courses and at least 12 quarter hours of student teaching, half of which must be with educable mentally retarded children:

EdSp 271 3
EdSp 272 3
EdSp 373 3
EdSp 374 5
EdSp 376 5
EdSp 377 3

SPECIAL TEACHING AREAS

Students in areas such as physical education, art, music and home economics may take courses in special education which prepare them to teach mentally retarded children and learning disabled children in their area of specialization. These students must complete EdSp 271 and either EdSp 272 or EdSp 474 as well as at least one other course determined by their specific area. Depending upon the area of preparation, these students may be required to complete additional course work and practicum as determined by consultation with their advisers.

TRAINABLE MENTALLY RETARDED CHILDREN

Students who desire to obtain a recommendation for approval by the Ohio Bureau of Mental Retardation to teach trainable mentally retarded children in addition to the requirements of their major should complete 27 quarter hours of specialization including (1) nine quarter hours in psychology including the psychology of exceptional children (EdSp 271 meets their requirements); (2) nine quarter hours in mental retardation including EdSp 272, and (3) nine quarter hours in related areas of child growth and development. The following courses together with at least 12 quarter hours of student teaching, half of which should be with the trainable mentally retarded children, are recommended. Any deviation should be approved by the adviser:

Psy 101 5
Psy 375 5
EdSp 271 3
EdSp 272 3
EdSp 372 3
EdSp 378 2
EdSp 379 3
EdSp 470 3
EdSp 475 4

LEARNING DISABILITIES AND BEHAVIOR DISORDERS

Students majoring in elementary or special education who wish to prepare to teach children with learning disabilities and behavior disorders must take the following courses and a minimum of six quarter hours of student teaching in a learning disabilities classroom.

EdSp 271	3
EdSp 272	3
EdSp 470	3
EdSp 474	4
EdSp 476	4
EdSp 477	3

SPEECH AND HEARING THERAPY

General Education

InCo 115 or 220	3
Physical education	3
Select 27 qtr hrs to include at least	
one course	27
from each of the following:	
Science and/or mathematics	
Comparative arts and/or philosophy	
Social science	
English	

Psychology:

Psy 101	5
Psy 331	4
Psy 373	5
Psy 433 OR 432	5
Psy 410 OR 451	5

Professional Education

Psy 375	5
EdSp 271 OR Psy 475	3-5
EdSp 474	4
EdPl 360 OR 361	2
HSS 443	4
EdPl 461 AND 462	12
EdPl 465 OR HSS 437	2-3

Requirements in Major

HSS 107-Voice and Artic	2
HSS 108-Intro Spch Disorders	3
HSS 309-Phonetics	3
HSS 310-Lang Devel	5
HSS 313-Resp and Phon Mechs I	3-4
HSS 314-Resp and Phon Mechs II	3-4
HSS 350-Speech Science	3-4
HSS 351-Lab Methods in Sp Sci	3-4
HSS 370-Basic Audiology	3-4
HSS 415-Stuttering	5
HSS 418-Dis of Artic	5
HSS 419-Dis of Voice	4
HSS 422-Diagnostic Proc	3-4
HSS 424-Neuropath of Sp Lang	3-4
HSS 440A, B, C-Soph Practicum	3
HSS 441A, B, C-Jr Practicum	3
HSS 442A-Sr Practicum	2
HSS 371-Auditory Rehab	3-4
HSS 472-Aud Dis Children	3-4
HSS 345-Social Dialects	4
HSS 444-Dis of Language	4
HSS 479-Basic Manual Commun	1

MENTAL RETARDATION EVALUATION UNIT

Established to provide diagnostic, referral and consultive services for counties for southeastern Ohio, the Mental Retardation Evaluation Unit, through demonstration and laboratory experiences, provides students with opportunities to become knowledgeable in the comprehensive diagnosis and educational prognosis areas of special education. The director, clinical coordinator, social worker, special educator, nurses and psychologist of the unit staff are members of the special education faculty of the University.

INSTRUCTIONAL MATERIALS CENTER

The center was established to provide a comprehensive special education instructional materials program for a multi-district area and to provide assistance for a continuing inservice education program with the focus upon instructional materials and methods for special education. The Multi-County Special Education Instructional Materials Center located in the College of Education provides students with opportunities to examine and use instructional materials pertinent to the needs of exceptional children.

STUDENT TEACHING

Successful student teaching represents the culmination of the program of professional preparation; it is a requirement for the bachelor of science in education degree. No candidate will be considered for the degree, or for recommendation for a teaching certificate, who has not completed, under the supervision of Ohio University, at least 12 quarter hours of observation, participation and student teaching.

Application

It is the responsibility of the student to enter an application for student teaching in the office of the Director of Student Teaching, not later than December 1 preceding the academic year in which a student teaching assignment is desired.

Schedule and Facilities

Students experience the complete range of the teacher's activities in full-time student teaching assignments for one quarter. All students must plan carefully during the first three years of college to provide for a completely free quarter to engage in full-time student teaching. Majors in elementary education will follow a plan providing for student teaching in the last quarter of the junior year or the first or second quarter of the senior year. Majors in secondary academic areas and special fields will normally be assigned to student teaching during one of the quarters of the senior year.

Most of the student teaching assignments will be in off-campus centers. Students must provide their own transportation to their assignments. Privately owned cars will be needed unless the student is assigned to an off-campus center where he may secure housing within walking distance of the school to which he is assigned. Only a few elementary majors can be assigned within walking distance of University housing units in Athens. Personally owned transportation will be needed by virtually all students who request the Athens area. The University assumes no responsibility for the transportation of students.

Prerequisites for Student Teaching

General prerequisites

1. Residence: Completion of at least two quarters (30 quarter hours) of residence work, including nine credit hours on the Athens campus.
2. Completion of at least 120 quarter hours of course credit in elementary and 135 quarter hours in secondary education.
3. Completion of field experience, EdPl 360, or by special permission, EdPl 361. These experiences will be completed in September or during the summer prior to the student's junior year and should be arranged with the Director of Student Teaching in the spring quarter of the sophomore year.
4. Scholastic average: The student must have a point-hour ratio of 2.0 (C) on all hours attempted.
5. Admission to junior standing in teacher education at least one full quarter prior to student teaching.

Special prerequisites for student teaching in elementary education:

1. 2.25 cumulative point-hour ratio on all courses completed in the following group: EdEl 200, 310, 321, 330, 340, 350, Art 360, Mus 161 and Psy 375.
2. Completion of nine quarter hours on the Athens campus including at least one of the following courses: EdEl 310, 321, 330, 340, 350.
3. Completion of all courses required (prior to the designated student teaching quarter) as indicated on the student's planned program outline (A, B or C).

Special prerequisite for student teaching for special education majors

1. Completion of Psy 375, EdEl 310, EdSp 271, EdSp 272, EdSp 373, EdSp 374, EdSp 375, EdSp 376, EdSp 470, and if under Plan S (secondary), EdSp 377 and one of the following: EdSe 250, or 351, attaining a cumulative average of 2.25.
2. Completion of at least nine quarter hours of credit on the Athens Campus including at least two of the following courses: EdSp 373, 374, 375, 376 and 470.
3. Speech and hearing therapy majors must complete Psy 375, EdSp 271 or Psy 475, EdSp 474, and HSS 443, obtaining a cumulative average of 2.25. Completion of at least 9 qtr hrs of credit on the Athens campus including two of the above-mentioned required courses.

Special prerequisite for student teaching in special education for majors in elementary education or majors in secondary education

1. Completion of EdSp 271, 272, 374, 375 and 376, attaining a cumulative average of 2.25.

Special prerequisites for student teaching in secondary academic and special subjects

1. Completion of Psy 375, EdSe 250 or H297, EdSe 351 and a methods course in the major teaching field, attaining a cumulative point-hour ratio of 2.25.
2. Completion of nine quarter hours credit on the Athens campus, including at least one of the required secondary education (EdSe) courses.
3. Students preparing to teach in one field must complete a comprehensive major. If a comprehensive major is not completed, the student must be prepared in two teaching fields.
4. Completion of a major portion (at least three-fourths) of the work in each of the teaching fields in which the student wishes to be certified. A cumulative point-hour ratio of 2.25 must be attained in the principal teaching field. An average of at least a 2.0 must be achieved in the second teaching field and in each principal component of the comprehensive majors. Transfer students must complete at Ohio University at least one-fourth of the preparation in the principal teaching field.
5. Completion of the general education requirements for certification in accordance with a pattern adopted by the University, consistent with the state certification laws and regulations.

TEACHING CERTIFICATES

A student who plans to teach in Ohio makes application for a teaching certificate at the time of application for graduation.

Applications may be obtained from the Student Personnel Services Office, McCracken Hall, Room 124. The teaching cer-

tificate is issued by the State Department of Education and qualifies the student to teach the subjects indicated on the certificate.

Completion of requirements for graduation and of the professional courses required for certification does not insure that the individual will be recommended for certification. Instructors in various courses, and especially in courses in education and student teaching, will attempt to evaluate a student's fitness for the teaching profession in ways other than observation of academic performance in the classroom. Any reports of limitations which might tend to impair the individual's usefulness as a teacher in the public schools will be made a part of the student's record. When the student makes application for certification this record will be examined and the question of his fitness for teaching will be given further consideration.

Students who are not planning to teach in Ohio should inform themselves concerning the requirements specified by the department of education of the state in which they expect to teach.

Major Field of Specialization

The level of preparation in the major area of specialization must correspond with the outline provided in the preceding pages, even though these requirements in many instances exceed those shown in the state certification regulations.

Second Teaching Field

The level of preparation in the second certifiable field must equal or exceed requirements shown in the regulations of the Division of Certification of the State Department of Education. Curriculum guides for minors are available in the Student Personnel Services Office, McCracken Hall, Room 124. The following minors have been approved:

- Biological science
- Bookkeeping-basic business
- Chemistry
- Earth science
- Economics
- Educational media

English
General science
Geography
Government
Health education
History
Industrial arts
Journalism
Latin
Mathematics
Physics
Social psychology
Sociology
Speech

Any secondary or special field certificates can be validated to teach the following areas:

Data Processing
Driver Education
Reading

Requirements for these validation areas may be obtained in the Student Personnel Services Office, McCracken Hall, Room 124.

OTHER PROGRAMS AND SERVICES

Center for Educational Research and Service

The Center for Educational Research and Service is a division of the College of Education which is designed to make available the resources of the College of Education and of the University to educational workers—teachers, administrators and supervisors, boards of education and the public communities served by Ohio University.

The center's chief functions are: (1) to provide consultant services in such areas as curriculum planning, use of community resources, economic education, guidance programs, school-community relations, reading, testing and supervisory and administrative problems; (2) to conduct school surveys of educational programs and curricula, school building and site needs and organization of school districts; (3) to assist in the solution of professional problems through off-campus and on-campus workshops; (4) to promote

conferences on vital problems confronting public education; (5) to publish those studies and reports which will aid in solving educational problems, and to distribute such publications; (6) to assist schools with the organization or revision of programs of reading (especially for exceptional children), guidance and testing, and (7) to encourage cooperative attack by teachers, administrators, boards of education and the public toward solution of educational needs.

Cooperative Center for Social Science Education

The Cooperative Center for Social Science Education is concerned with program development in the social sciences in elementary, secondary and teacher training levels.

Working together in this activity are a number of public schools representing regional areas from New York to Oregon.

Throughout the year, the cooperative center carries on in-service projects and provides consultant services to the cooperating schools. An international studies advisory council composed of foreign students and university professors works with teacher committees in the schools in the development of cultural and area studies aspects of social science curricula.

The cooperative center is supported by funds from the cooperating schools and from Ohio University.

Placement

The Placement and Internship Service, located in Berry Hall, offers assistance to undergraduate and graduate students and alumni of the University who are seeking educational positions.

Information concerning available teaching and administrative positions in the public schools, as well as openings in education, student personnel, home economics, counselor education, industrial arts and physical education departments of colleges and universities of most states and many foreign countries is disseminated through the bureau.

There is a \$2 initial registration fee. An additional \$2 fee is charged for alumni who wish to have the placement services made available to them.

Guidance, Counseling and Student Personnel Services

Personnel programs focusing on the pupil in the elementary and secondary school setting include counseling and guidance services, psychological services, social work services, health services, speech and hearing therapy services, visiting teacher services and the like. Of these services, the training of the school counselor, the school psychologist and the visiting teacher is the main thrust of the program. These kinds of positions require certification by the State Boards of Education in most states. In Ohio, and in most other states, a person aspiring to such position must also be certified to teach and to have had teaching experience for full certification. Besides a teaching field, undergraduates are encouraged to take courses in child psychology, adolescent psychology, personality, learning theory and human growth and development.

Personnel programs focusing on the work of the student in settings beyond the high school level involve such people as the school or university counselor, deans of students, director of housing, admissions officer, financial aids, discipline, sorority-fraternity adviser, foreign student adviser and the like. Undergraduates interested in this field do well to become involved in all aspects of University life, especially the programs built around dormitory life, as well as a heavy concentration of psychology, sociology and education.

The work of this department leads to the master of education degree. Several courses are offered at the undergraduate level to introduce the student to the field of study. The masters programs are described in the Graduate College Bulletin. A more detailed description of the programs may be secured from the Guidance Training Laboratory office in the College of Education. Staff members are available for consultation through the same office.

The College of Education Laboratory School

The College of Education of Ohio University maintains a laboratory school, consisting of a five-year kindergarten and levels

one through six. A dual function of this school is to improve teacher education and furnish the best possible learning environment and instruction for children. With this stimulating environment and instruction for children, good laboratory experiences are made available to college students who are training for elementary education or supervision. Teachers in the laboratory school are members of the University staff with training in elementary education and supervision and successful teaching experience.

SCHOOL OF HEALTH, PHYSICAL EDUCATION AND RECREATION

James A. Lavery, *Director*

Major and minor curricula are offered for prospective teachers of health education, physical education, athletic coaching and recreational leadership. By fulfilling the requirements, students who major in the School of Health, Physical Education and Recreation will apply for the bachelor of science in education degree.

The school also offers a program of graduate study leading to the masters degree.

A major in health prepares men and women students for the following positions: teachers of health education and community health service.

A major in physical education prepares men and women students for the following positions: teachers of physical education in the elementary and secondary schools, athletic coaching, playground directors, camp counselors and as recreation supervisors for industrial concerns and municipalities.

A minor in health education will qualify the student to assume health education responsibilities in the elementary and secondary schools.

A minor in physical education and athletics is the minimum program acceptable to the State Department of Education for the teaching of physical education and the coaching of athletic teams in the schools of Ohio.

A minor in recreation will prepare the

student for supervision in school, industrial and community recreation programs, summer playgrounds or camping activities.

General education and professional requirements may be found in the Secondary Education section within the College of Education section of this catalog.

Curricula

PHYSICAL EDUCATION MEN (MAJOR)

Bot 101 or Zool 101	Prin of Biol	5
Zool 301	Human Anatomy	6
Zool 345	Human Physiology	4
Zool 352	Kinesiology	4
HPER 261	Intro to Physical Education	1
HPER 202	Personal and Community Health	4
HPER 227	First Aid	4
HPER 250	Recreation	5
HPER 265	Program Skills	2
HPER 266	Elementary Physical Education	2
HPER 267	Program Skills	2
HPER 321	Program Skills	2
HPER 322	Program Skills	2
HPER 323	Program Skills	2
HPER 333	Theory of Adapted Activities	4
HPER 334	Program Techniques	1
*HPER 305	Coaching of Swimming ...	2
*HPER 318	Coaching of Tennis	3
*HPER 320	Coaching of Wrestling ...	3
*HPER 324	Coaching of Soccer	3
*HPER 351	Coaching of Golf	2
*HPER 352	Coaching of Ice Hockey ...	3
*HPER 353	Coaching of LaCrosse ...	3
*HPER 365	Coaching of Basketball ...	3
*HPER 366	Coaching of Baseball	3
*HPER 367	Coaching of Football	3
*HPER 368	Coaching of Track and Field	3
HPER 381	Administration of Intramurals	4
HPER 404	History and Principles of Physical Education ...	5
HPER 406	Org and Administration of Physical Education	5
HPER 409	Tests and Measurements ..	5
HPER 495	School Health Problems ...	5

*(Majors are required to take four of the athletic coaching courses).
(At least one from each of the three participating seasons).

PHYSICAL EDUCATION WOMEN (MAJOR)

Bot 101 or Zool 101	Prin of Biol	5
Zool 301	Human Anatomy	6
Zool 345	Human Physiology	4
Zool 352	Kinesiology	4
HPER 103	Beginning Swimming	1
HPER 104	Intermediate Swimming ...	1
HPER 105	Advanced Swimming	1
HPER 107	Beginning Modern Dance	1
HPER 108	Intermediate Modern Dance	1
HPER 109	Advanced Modern Dance	1
HPER 115	Folk Dance	1
HPER 141	Golf	1
HPER 202	Personal and Community Health	4
HPER 221	Tennis and Badminton ...	3
HPER 222	Tumbling and Gymnastics	3
HPER 223	Track and Field	2
HPER 227	First Aid	4
HPER 250	Recreation	5
HPER 262	Field Hockey and Soccer	3
HPER 263	Basketball and Volleyball	3
HPER 264	Softball and Archery	3
HPER 266	Elementary School Physical Educ	2
HPER 333	Theory of Adapted Activities	4
HPER 369	Teaching of Health	5
HPER 371	Theory and Practice in Sports I	2
HPER 372	Theory and Practice in Sports II	2
HPER 374	Theory and Practice in Rhythms I	1
HPER 375	Theory and Practice in Rhythms II	1
HPER 404	History and Principles of Phys Ed	5
HPER 406	Org and Administration of Phys Ed	5
HPER 409	Tests and Measurements ..	5
HPER 495	School Health Problems ...	5

HEALTH EDUCATION (MAJOR)

Bot 101 or Zool 101	Prin of Biol	5
Biol 101	General Biology	5
Zool 301	Human Anatomy	6
Zool 310	Bacteriology	4
Zool 345	Human Physiology	4
Psy 331	Psychology of Adjustment	4

Education

Psy 432	Abnormal Psychology . . .	5
Soc 360	Social Issues	4
HPER 202	Personal and Community Health	4
HPER 204C	Drug, Alcohol and Tobacco Education	4
HPER 227	First Aid	4
HPER 328	First Aid-Instructors . . .	4
HPER 333	Theory of Adapted Activities	4
HPER 370	School Health Services and Health School Environment	4
HPER 240	Community Health Programs	4
HPER 380	Safety Education	4
HPER 409	Test and Measurements . .	5
HPER 495	School Health Problems . .	5
HEc 128	Introduction to Nutrition	3
HEc 429	Community Nutrition . . .	3
HEc 470	Family Living	3
HEc 471	Family Living Education . .	4

Teaching minors are offered in the following areas and meet the minimum State Department of Education requirements.

- Physical education (men)
- Physical education (women)
- Health education
- Athletic coaching

A minor in recreation leadership is also available to interested students. Course outlines are available from the School of Health, Physical Education and Recreation Office in Grover Center, 2nd floor.

SCHOOL OF HOME ECONOMICS

Beulah E. Sellers, *Director*

Home economics is a diversified field of study. Its unique purpose is to integrate the contributions of the physical, biological and social sciences, philosophy and art into one functional whole for service to families.

The curricula of the School of Home Economics have three specific purposes: general education for personal and family living, specialization in various areas of home economics for professional persons desiring to work directly or indirectly with families

and courses planned to enrich the professional preparation of students enrolled in other colleges. The program is both cultural and professional and includes:

- (a) General education in communications, natural science, humanities, social science and art.
- (b) Basic courses in all areas of home economics.
- (c) Professional courses in the major field and related areas.

The School of Home Economics offers 13 professional curricula leading to the BS in home economics degree. In addition, four curricula are offered for those following the two-year terminal program leading to the AA degree. Graduate work leading to either the MS degree or the MEd degree is also offered (see Graduate College Bulletin).

Students have a wide choice in selecting a field of specialization. Professional curricula are offered in the following departments: Child Development and Family Life, Foods and Nutrition, Home Economics Education and Extension, Housing, Furnishings and Management and Textiles and Clothing.

SPECIAL FACILITIES. The program in home economics provides for a variety of activities and experiences. Two nursery schools and two home management houses are maintained on campus. Local high school home economics laboratories are available for student teaching. The School of Home Economics is approved by the State of Ohio Department of Education for training vocational home economics teachers. Off-campus activities have been developed with the Ohio State Cooperative Extension Service, the Health Department, business organizations, department stores, hospital dietary departments and radio-television stations to give the students opportunities for field work in specialized areas. Affiliation with the Merrill-Palmer Institute in Detroit, Mich., provides a unique experience for the junior or senior desiring a quarter of specialized training in all areas related to human development.

ELECTIVE COURSES AND SPECIAL PROGRAMS. The School of Home Economics offers a group of core courses that have no prerequisites and are open to any student in the University. Individual courses may be

elected. Special seminars or workshops for international students or for students who want to prepare for international service are offered each quarter.

Degree Requirements for all Home Economics Majors

Candidates for the degree of BS in home economics must fulfill the general requirements of the University, must complete a minimum of 180 hours, plus any physical education in excess of three hours. A point-hour ratio of 2.0 (C) is required on all hours attempted, but includes only final hours and grade points on repeated courses.

Opportunities for the professional home economist have never been greater in the business and professional world. Career opportunities are listed under each professional option. All majors in any field of home economics will take courses listed under requirements in general education, requirements in home economics, basic course requirements in the major field of study and requirements for the option selected in the area of specialization.

Requirements in General Education

Basic courses in general education required of all majors in home economics include:

English	10
InCo 101	3
Soc 101 or 302	5
Psy 101	5
Econ 101 or 301	4
Science (See Professional Curricula)	9-18
Humanities and/or Literature (See Professional Curricula)	3-15
Art (See Professional Curricula)	3-6
Physical education (See Professional Curricula)	3

Requirements in Home Economics

Basic courses in home economics required of all majors include:

HEG 101	2
HEFN 128	3
HECF 160	3
HEHM 180	3
HETC 317	3
HECF 371	3
HEHM 395	3
HEHM 396	4

Requirements for Professional Curricula

CHILD DEVELOPMENT AND FAMILY LIFE

Basic course requirements for all child development and family life majors.

HECF 160 or 360	3
HECF 270 or 470	3
HECF 361	3
HECF 462	3-6
Psy 331 (4), Psy 375 (5), Psy 433 (5) or approved substitutes*	14
Soc 360	4
HSS 336	3-4
LSc 201	3
Zoology or botany	11-15
Approved electives in humanities and/or literature*	3
Art	3-6

Select one option for area of specialization:

Option A—Nursery School Teaching: prepares students for teaching in nursery schools, day-care centers, Head Start programs and schools for handicapped children.

HECF 363	4
HEFN 432	3
HECF 463	3
HECF 464	6
EdEl 321	4
Mus 160	3
HPER 227	4
Art 360	3
EdAv 480	4
EDGS 410	3

Approved electives to total 40 hours*

Option B — Child Development-Community Service: prepares student for graduate study in child development or for work with community agencies, children's hospitals, clinics, children's homes and Head Start programs.

HEHM 390	3
HEG 399F	4
HEFN 429 (3) or HEFN 432 (3)	3
Psy 103 (5), Psy 321 (5), Psy 341 (5) or approved substitutes*	15
Math 113	5
EDGS 410	3
Soc 323 (4), SW 391 (4), SW 392 (4), SW 493 (4), SW 490 (4) or approved substitutes*	20

Approved electives to total 40 hours

*Approval from chairman of the department.

Option C — Family Life-Community Service: prepares students for graduate study in family life or for work with youth programs, community recreation, settlement houses and family service agencies.

Education

HEHM 390	3
HECF 471	4
Approved electives in psychology*	20
Approved electives in sociology and anthropology*	20
Approved electives to total 40 hours	

*Approval from chairman of the department.

FOODS AND NUTRITION

Basic course requirements for all foods and nutrition majors.

HEFN 122	4
HEFN 320	3
Chem 121, 122, 123	13
Chem 301, 302	6
Zool 411	6
Humanities and/or Literature	3-10
Art	3-6

Select one option for area of specialization:

Option A—Dietetics: qualifies students for the American Dietetic Association hospital internships leading to careers as therapeutic and administrative dietitians. Some will teach in hospitals, work with institutes, dietetic and medical associations and clinics.

HEFN 422	4
HEFN 425	3
HEFN 428	4
HEFN 430	4
HEFN 434	4
HEFN 435	4
HEFN 436	4
HEFN 437	3
HEFN 438 or HEG 399C	2-4
Elective in advanced foods*	3-6
Elective in advanced nutrition*	3-6
Acct 101	5
Econ 102 or 302	4
Psy 375	5
Psy 361	5
or	
Mgt 420	4
Zool 345	4
Zool 463	4
Approved general education electives*	2-6
Electives	24-32

*Approval from chairman of the department.

Option B—Restaurant and Food Service Administration: prepares students for careers in management and supervision in hotels, motels, restaurants, public schools, residence halls and industry. This curriculum meets the requirements of the National Restaurant Association and the American Dietetic Association for apprenticeship or internship training in leading food service establishments.

HETC 315	4
HEFN 422	4
HEFN 425	3

HEFN 428 or 432	3-4
HEFN 434	4
HEFN 435	4
HEFN 436	4
HEFN 437 or Mgt 420	3-4
HEFN 438	2-4
Approved electives in foods and nutrition*	6
Econ 102 or 302	4
Acct 303	4
Mgt 300	4
Mgt 420	4
Mgt 425	4
Jour 250	5
BusL 355	4
Approved courses in accounting and finance*	12-15
Approved electives in psychology*	
BIC 220, 320	6
Zool 345	4
Approved general education electives*	3
Electives	5-10

*Approval from chairman of the department.

Option C—Experimental Foods and Nutrition Emphasis I—Commercial Foods and Equipment: prepares students for promotional work with utility companies, food or equipment companies, newspapers and magazines.

HEHM 390	3
HEFN 321	3
HEED 341	3
HEHM 391	4
HEFN 422	4
HEFN 423	4
HEFN 426	3
HEFN 434	4
HEHM 492	3
Approved electives in nutrition ¹	
Jour 441	4
Econ 102 or 302	4
InCo 103	4
Approved electives in business and/or communications*	19
Approved general education electives*	4-19
Electives	8-23

¹Students wishing to meet academic requirements of the American Dietetic Association should take HEFN 428 plus Zool 345, Zool 363, personnel management or industrial psychology and educational psychology.

Emphasis II — Foods and Nutrition with Science: prepares students for graduate study or careers in nutrition with clinics, institutes, associations and welfare agencies.

HEHM 390	3
HEFN 321	3
HEFN 422	4
HEFN 423	4
HEFN 425	3
HEFN 426	3
HEFN 428	4

HEFN 429	3
HEFN 430	4
HEFN 431	3-4
HEFN 432	3
HEFN 434	4
Chem 303, 304	2
Chem 325	5
Zool 345	4
Zool 363	5
Psy 375	5
Approved general education electives*	3
Electives ²	

²Students wishing to meet academic requirements of the American Dietetic Association should elect one of the following: Mgt 420, Psy 361 or statistics.

*Approval from chairman of the department.

HOME ECONOMICS EDUCATION AND EXTENSION

Option A — Home Economics Education: prepares students for teaching home economics in the junior and senior high schools and adult education programs.

Basic course requirements for all home economics education majors.

HETC 110	2
HETC 112	3
HEFN 122	4
HETC 315	4
HEHM 390	3
HEFN 320	3
HEED 340	3
HECF 361	4
HEHM 391	4

Approved electives selected from 300 to 400 level courses in the following areas:*

Child Development and Family Life	3-6
Foods and Nutrition	3-6
Housing, Furnishings and Management ..	3-6
Textiles and Clothing	3-6

*Approval from chairman of the department.

Math	2-5
Science (bot and zool or chem)	13-15
Zool 310	4
Fine arts, religion or philosophy including at least 3 hrs of art	9
Literature elec	3-5
Psy 375	5
EdPl 360	2
EdSe 250	4
EdSe 351	5
EdSe 480	3
EdPl 463, 464	12
EdPl 465	3
Electives	6-9

Students may complete requirements for job training certification by taking 45 hours of course work in a specialized area of home economics. Permission must be granted by the home economics education adviser.

Option B — Home Economics Extension: prepares students for positions with the Co-operative Extension Service.

Home Economics extension majors take all basic course requirements listed above for home economics education majors.

Other suggested courses:

HEED 341	3
HEED 441	3
HEED 444	4

HOUSING, FURNISHINGS AND MANAGEMENT

Option A — Home Planning and Decoration: offers basic preparation that qualifies students for initial positions in the field of home furnishings and interior design.

Basic course requirements for all home planning and decoration majors.

HETC 110	2
HETC 112	3
HEFN 122	4
HEHM 180	3
HETC 315	4
HEHM 384	3
HEHM 385	4
HEHM 480	3
HEHM 481	3
HEHM 482	3
EnvD 301, 302, 303	12
EnvD 151, 152, 153	9
EnvD 401, 402, 403	15
Arch 343, 344, 345	15
Approved required courses in business	9
CA 117, 118, 119	9
Econ 102 or 302	4
Jour 250	5
Mkt 301	4
Literature elective	3-5
Science — botany, zoology, physical world or chemistry	9-15

Option B — Home Economics in Business: a special option which can be combined with any other area of home economics. Students are prepared for positions with newspapers, women's magazines, radio and television companies, department stores and manufacturing companies.

Education

Basic course requirements will include required courses in area of interest in home economics* plus the following:

HEED 341	3
R-TV 121	4
R-TV 106	4
Jour 231	4
Jour 331	3
Jour 441	4
InCo 103	4
InCo 404	3
InCo 412	3
EdGS 410	3
Approved electives in journalism or radio-television*	6-9

*Approval from chairman of the department.

TEXTILES AND CLOTHING

Basic course requirements for all textiles and clothing majors:

HETC 110	2
HETC 112	3
HETC 315	4
HEHM 390	3
HETC 308	4
HETC 314	4
HETC 402	4
HETC 405	3
HETC 419	4
Art 101, 102	10
CA 117, 118, 119	9
Chem 121, 122, 123	13
Econ 102 or 302	4
Jour 250	5
Mkt 301	4
Approved electives in literature and/or language*	3-8

Select one option for area of specialization:

Option A—Fashion Merchandising and Promotion: prepares students for positions as buyer, fashion coordinator or consultant in department stores, traveling stylist for pattern or fabric manufacturers or for promotional instruction and demonstration.

HETC 407	5
HEHM 480	3
Jour 441	4
Approved electives in business	9-15
Approved electives in general education*	20
Electives	10-15

Option B — Textile Testing and Consumer Services: prepares students for positions in testing laboratories of large chain companies or fabric manufacturers and for promotional instruction in laundry, equipment and soap or detergent companies.

HEED 341	3
HEHM 391	4
HEHM 492	3
Approved electives in art or art history*	3-6
Approved electives in science*	10-15
Approved electives in general education* ..	10-12
Electives	18-20

Option C—Dress Design: prepares students for the position of dress designer and other technical or managerial positions in clothing manufacture.

Art 103	5
Art 228	3
Approved electives in art and/or business* ..	15-18
Approved electives in general education*	20
Electives	8-15

*Approval from chairman of the department.

The College of Engineering and Technology

Beaumont Davison, *Dean*

Irvin P. Badger, *Assistant Dean*

Degrees and Requirements

The College of Engineering and Technology offers curricula leading to the bachelor of science degree in the fields of engineering and industrial technology.

Each candidate for a degree in the College of Engineering and Technology must have a minimum of 180 quarter hours and must satisfy all of the curriculum requirements of his particular field as specified on the following pages. In addition he must have a 2.0 (C) point-hour ratio on all hours attempted and a 2.0 (C) point-hour ratio on all hours attempted in engineering and industrial technology. These averages will be computed on final hours and points in repeated courses if any.

Curricula in Engineering and Technology

Engineering curricula accredited by the Engineers' Council for Professional Development are offered in chemical engineering, civil engineering, electrical engineering, industrial and systems engineering and mechanical engineering. A BS degree is offered in industrial technology.

With planning, a student may obtain a degree from the College of Arts and Sciences, the College of Business Administration or the College of Fine Arts as well as a bachelor of science degree in this college upon completion of 15 quarters in the University. (See "Degree, Second Bachelor's.")

Admission to an Engineering and Technology Program

High school students who wish to follow one of these curricula should plan to present for admission to the University those subjects which meet the recommendations of the University College, including the additional mathematics listed under "Subjects in High School" in the admissions section of the catalog. High school students are encouraged to enter the University in June and take preparatory work during the summer session if they have not completed mathematics and other minimum entrance requirements. This will ease scheduling difficulties and enable them to complete the program in the normal period. In particular, students who are not properly prepared in high school mathematics must enroll in preparatory mathematics courses. A student should indicate his choice of curriculum on his official application for admission to the University. This will assure proper guidance in the University College program of study and advising.

To be admitted to an engineering program from the University College, a student must at the time of admission to the engineering program have satisfactorily completed 45 quarter hours. No mathematics course below Math 263A, Analytic Geometry and Calculus, or its equivalent, is counted toward satisfying the requirements of a degree in engineering.

A student whose point-hour ratio is less

than 2.0 (C) for the freshman year is admitted to an engineering program on a "warning" basis.

Every engineering student should be prepared, after completion of his four-year program, to pass the examination given by the Board of Registration for Professional Engineers of the state in which he intends to practice. The Ohio board allows those who have completed the standard four-year curriculum to appear for examination. It is to the student's advantage to take the examination during the spring or fall quarter closest to the expected time of graduation or as soon as possible after graduation.

Requirements for Continuing in the College

A student who has been admitted to a program with a cumulative point-hour ratio of less than 2.0 (C) must remove the grade-point deficiency by the end of the third quarter in the program. A grade-point deficiency in major subjects will not be permitted after three quarters in the program. Failure to meet these requirements may result in a student being dropped from the program.

Humanities-Social Science Electives

Each departmental curriculum includes an extensive program of study in the social sciences and humanities. Each student is required to consult with his adviser to determine an acceptable program in these areas.

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

The chemical engineering program is planned so that its graduates are familiar with the techniques used in analyzing and solving engineering problems associated with the chemical and related industries (petroleum, metallurgical, plastics, etc.). In addition, the program provides an excellent background for graduate study in engineer-

ing, science or business administration.

Study in chemistry, mathematics, physics and communication skills is emphasized. Courses in engineering fundamentals are introduced, followed by intensive work in engineering analysis and design. Emphasis is placed upon the application of principles from many fields of study to the solving of engineering problems. Computer solutions, process control theory, economics and similar topics are stressed. Electives permit the student to pursue his interest in humanities, social sciences and technical areas.

Chemical Engineering

Freshman

<i>Fall</i>	
Math 263A Analytic Geom. & Cal.	5
Chem 121 Gen. Chemistry	5
Soc Sci. or Hum.**	

Winter

Math 263B Anal. Geom. & Cal.	5
Chem 142 Gen. Chemistry	5
EG 101 Engr. Graphics*	3
InCo 101 Freshman Speech*	3

Spring

Math 263C Analytic Geom. & Cal.	5
Chem 143 Gen. Chemistry	5
ENT 100*	3
Soc Sci. or Hum.**	

*May be taken in any order.

Sophomore

<i>Fall</i>	
Chem 305 Organic Chem.	3
Phys 251 Gen. Physics	5
ChE 200 Intro. Chem Engr.	4
Humanities or Soc. Sci.**	

Winter

Chem 306 Organic Chem.	3
Phys 252 Gen. Physics	5
Chem 303 Organic Chem. Lab.	1
Math 340 Differential Equa.	5
Humanities or Soc. Sci.**	

Spring

Chem 307 Organic Chem.	3
Phys 253 Gen. Physics	5
ChE 331 Prin. of Engr. Matls.	4
CE 220 Statics	4

Junior

<i>Fall</i>	
ChE 342 Unit Oper. I.	5
ChE 302 Thermo-Kinetics I	4
Chem 453 Physical Chem.	3
EE 313 Basic Elec. Engr. I	3

Winter

ChE 343 Unit Oper. II	3
ChE 303 Thermo-Kinetics II	4
Chem 454 Physical Chemistry	3
EE 314 Basic Elec. Engr. II	3
ChE 413 Lab I-Digital	1
ChE 418 Matls. Lab.	1

Spring

ChE 344 Unit Oper. III	4
ChE 304 Thermo-Kinetics III	3
Chem 455 Physical Chemistry	3
Chem 456 Physical Chem. Lab.	2
ChE 414 Lab II-Analog	1

Senior

<i>Fall</i>	
ChE 443 Design	4
ChE 415 Lab III-Unit Oper.	3
ChE 442 Process Control	4
ChE Elective	3

Winter

ChE 444 Design	3
ChE 416 Lab-VI Unit Oper.	3
ChE 480 Colloquium	1
Technical Elective***	3
Soc. Sci. or Hum.**	

Spring

ChE 417 Lab V-Process Control	2
Technical Elective***	6
Soc. Sci. or Hum.**	

ALSO: **Note that, in general, courses outside the ChE sequence can be taken at anytime, provided that prerequisites have been met. A total of 24 hours must be taken in the areas of social sciences and humanities, with a minimum of nine hours in each area.

***Minimum list available in departmental office. These are courses in the areas of engineering, chemistry, mathematics and physics.

Minimum of 180 hours required for the degree.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

The civil engineering curriculum is designed to give the student a broad understanding of the basic physical sciences and mathematics. It provides him with a knowledge of civil engineering principles and

practice in the areas of (1) engineering materials, including fluids and soils; (2) design of highways and other transportation facilities, including traffic control systems; (3) design and construction of structures of all types, and (4) environmental sanitation with particular emphasis on water supply and wastewater disposal. The curriculum also is designed to enhance the student's understanding of the world and its culture by introducing him to university-level study in humanities and social sciences.

Civil Engineering

Freshman

Chem 121 ..5	Chem 122 ...4	Chem 123 ...4
ENT 100* ..3	EG 101* ...3	InCo 101* ..3
Math 263A ..5	Math 263B ..5	Math 263C ..5
Elective	Elective	Elective

* May be taken during any one of the three terms

Sophomore

EG 1213	CE 3214	Geol 283 ...5
CE 2204	Phys 252 ...5	CE 2224
Phys 2515	ChE 331 ...4	CE 2231
CE 1104	Elective	Phys 253 ...5

Junior

CE 3411	CE 370 ...4	CE 3314
CE 3405	CE 330 ...4	CE 3423
Math 340 ...5	ME 321 ...4	CE 3433
ISE 4053	CE 3114	CE 3614
Elective		Elective

Senior

CE 4324	CE 4334	Elective
CE 4503	CE 4513	
EE 3133	EE 3143	
Elective	Elective	

Above list shows only the courses which are specifically required for a civil engineering degree. In addition to these, 24 credit hours are required in the humanities and social sciences with no fewer than eight in either field. Humanities may be in literature, philosophy, foreign language and certain courses in fine arts and other fields. Social science electives may be in government, history, economics, social science and in certain other fields. A list of acceptable electives is available in the civil engineering office.

Also in addition, any three civil engineering courses taken from the list below are required.

Fall quarter: CE 481 Pavem. Des., CE 424 Str. Mtls.

Winter quarter: CE 462 Traffic, CE 415 Photogrammetry

Spring quarter: CE 210 Survey, CE 471 Found., CE 434 Struct.Des., CE 452 Wtr.Anal.

Qualified students may, with the permission of the instructor, substitute certain graduate level courses for the foregoing civil engineering electives.

Minimum of 180 credit hours is required for the degree.

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Electrical engineering is an extremely diversified field of science and engineering. The curriculum in electrical engineering reflects this with the inclusion of a strong base of science and mathematics as well as general courses in fundamental aspects of electrical engineering. Following these foundation elements, a wide choice of electives in both engineering and science allows preparation for a certain specific area of practice. Alternatively, this elective choice facilitates preparation for further study to the MS or PhD level in electrical engineering.

Electrical Engineering

Freshman					
Math 263A .5	Math 263B .5	Math 263C .5			
Chem 121 ..5	Chem 122 ..4	Chem 123 ..4			
ENT 100* ..3	EG 101* ...3	InCo 101* ..3			
Elective	Elective	Elective			

*any order satisfactory

Sophomore					
EE 2103	EE 2113	EE 2123			
EE 2203	EE 2213	EE 2223			
Phys 251 ...5	Phys 254 ...5	EE 2325			
Math 340 ...5	Elective	CE 2204			

Junior					
EE 3011	EE 3021	EE 3031			
EE 3103	EE 3113	EE 3124			
EE 3304	EE 3314	EE 332*2			
EE 3404	EE 3414	EE 342*2			
Elective	EE 3214	EE 3224			
		Phys 316 ...3			

*one required

Senior					
EE 401* ..1-3	EE 402* ..1-3	EE 403* ..1-3			
Tech.	Tech.	Tech.			
Elect.** ..9	Elect.** ..6	Elect.** ..6			
Elective	CE 2224	ME 3214			
	Elective	Elective			

*Minimum of 1 each quarter until a total of 5 has been completed.

**Minimum of 21 hours of 400 level EE technical elective courses. Since these courses require concurrent registration in 400 level laboratory, students may not register for technical electives without satisfactory completion of EE 303 except with the approval of the EE lab committee prior to registration.

It is strongly recommended that the student use the elective portion of the program to satisfy the humanity-social science requirement of eight hours minimum in each area with 25 total hours including InCo 101. In the event InCo 101 is waived, the three hours must be taken in the humanity-social science area. Following is a list of acceptable courses.

Social Sciences

Anthropology
Black Studies Inst.
Economics
Geography

Government
History
Psychology
Sociology

Humanities

Art
Comparative Arts
English
Foreign Languages

Humanities
Music
Philosophy
Theater

More elective hours are included in the program than those required in humanities-social sciences. The remaining hours may be used as free electives in an area of the student's choice. A minimum of 180 hours is required for graduation.

BACHELOR OF SCIENCE IN INDUSTRIAL AND SYSTEMS ENGINEERING

Industrial and systems engineering is concerned with the design and analysis of integrated systems of men, equipment and materials. It draws upon knowledge from the mathematical, physical and behavioral sciences which, in conjunction with the principles and methods of engineering analysis and design, is used to predict, to design, to control and to evaluate the performance of complex systems. Although program emphasis is centered around industrial systems, consideration is also given to military, governmental and service systems.

Courses in the first two years of the program are similar to the curricula of other engineering departments, and provide the necessary foundation in basic subjects upon which advanced engineering work depends. The last two years of work provide the professional level material including computer-related instruction, necessary for the interdisciplinary activities that are required of the modern industrial or systems engineer.

Industrial and Systems Engineering

Freshman

Math 263A ..5	Math 263B ..5	Math 263C ..5
Chem 121 ..5	Chem 122 ..4	Chem 123 ..4
ENT 100 ...3	EG 1013	InCo 101 ...3
Electives*	Electives*	Electives*

Sophomore

Math 340 ...5	Math 213 ...5	Phys 253 ...5
Phys 251 ...5	Phys 252 ...5	CE 321 ...4
CE 220 ...4	CE 222 ...4	Electives*
ISE 231 ...2	CE 223 ...1	

Junior

ISE 405 ...3	ISE 406 ...3	ISE 435 ...3
ISE 430 ...3	ISE 420 ...3	BIC 220 ...3
ChE 331 ...4	ISE 333 ...5	ME 321 ...4
Acct 311 ...4	EE 313 ...3	EE 314 ...3
Electives*	Electives*	Electives*

Senior

ISE 432 ...3	ISE 440 ...3	ISE 445 ...3
ISE 433 ...3	ISE 441 ...3	Electives*
ISE 448 ...3	ISE 480 ...1	
Electives*	Electives*	

* Minimum of 43 hours of electives including 24 hours of humanities and social science electives, nine hours of engineering science electives and computer programming (FORTRAN). See your adviser or the department office for approved electives.

Minimum of 180 credit hours is required for the degree.

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Mechanical engineering emphasizes machine design and heat engineering. The work of the first two years is general and fundamental and parallels that in the other engineering curricula. The work of the last two years includes courses in theory development and systems analysis and control; in thermodynamics and its application to steam generators, steam engines and turbines, combustion engines and refrigeration and air conditioning. Work is included in other fields of engineering, such as fluid mechanics and electrical engineering. Limited specialization is provided for by elective courses.

Mechanical Engineering

Freshman

Chem 121 ...5	Chem 122 ...4	Chem 123 ...4
ENT 100 ...3	EG 101 ...3	Elective
Elective	Elective	InCo 101 ...3
Math 263A ...5	Math 263B ...5	Math 263C ...5

Sophomore

CE 220 ...4	CE 321 ...4	CE 222 ...4
EG 121 ...3	Elective	CE 223 ...1
Phys 251 ...5	Phys 252 ...5	Phys 253 ...5
BIC 220 ...3	IndT 117 ...3	Math 340 ...5
ME 489 ...1		

Junior

EE 313 ...3	EE 314 ...3	ME 313 ...3
EE 304 ...1	EE 305 ...1	ME 328 ...5
ChE 331 ...4	ME 301 ...5	ME 401 ...4
ME 321 ...4	CE 340 ...5	ChE 418 ...1
ME 322 ...1		
Elective		

Senior

ME 412 ...5	ME 424* ...3	ME 404* ...4
ME 403 ...4	Econ 301 ...4	ME 330 ...2
ME 491 ...3	ME 480 ...1	Tech
Tech	Elective	Elect ...6
Elect ...4	Phys 316 ...3	Elective

Electives

Econ 301 (or equivalent)	4
In a humanities sequence	9
(English, philosophy, fine arts, language)	
In a social science or economics sequence	9
(history, government, psychology, sociology)	
Free Choice	3

25

Minimum of 180 hours required for the degree (25 hours of humanities and social sciences)

* These courses may be considered as elective courses. All seniors interested in design should enroll in ME 404 while those interested in thermodynamics should enroll in ME 424. Additional technical electives should be taken to meet the 180 hours requirement.

BACHELOR OF SCIENCE IN INDUSTRIAL TECHNOLOGY

This program is designed to prepare personnel for responsibility in production areas of manufacturing industry.

Courses in mathematics, sciences and data processing are included in order to build channels for communication with engineering personnel. Management oriented courses are provided to assist in developing understanding of the industrial environment. Special emphasis is placed upon procurement of technical knowledge related to drafting, electronic and fluid power control, common materials and the techniques available for forming, machining and joining the materials of industry.

Alternate fields of specialization are available according to the selection of restricted electives. An optional plan, featuring industrial work during the college career, is available under the program of cooperative work-study established with several companies.

Industrial Technology

Freshman

IndT 115 ...4	EG 1013	EG 1023
Chem 121 ..5	Chem 122 ..4	Chem 123 ...4
Math 140A .5	Math 140B ..5	ENT 100 ...3
InCo 101 ...3	(263A)	Acct 1015
	Psy 1015	EG 1031

Sophomore

IndT 216 ...4	IndT 250 ...5	IndT 244 ...3
IndT 220 ...3	IndT 270 ...3	IndT 260 ...3
Phys 201 ...4	Phys 202 ...4	Phys 203 ...4
Humanity ...5	Econ 101 ..4	Econ 102 ...4
		Tech. Elect. .3

Junior

IndT 308 ...3	IndT 318 ...3	IndT 301 ...3
IndT 310 ...3	IndT 332 ...5	IndT 333 ...3
IndT 320 ...3	Mgt 3004	QM 310 ...3
Tech. Elect. .3	Tech. Elect. .5	Tech. Elect. .7
Humanity ...4		

Senior

IndT 362 ...3	IndT 390 ...3	Tech. Elect. .2
Tech. Elect. .6	Tech. Elect. .6	SSc or Hum .4
Gen. Elect.	Gen. Elect.	Gen. Elect.

Minimum of 180 hours required for the degree.

TEACHING INDUSTRIAL ARTS

Students who desire to teach industrial arts normally enroll for the bachelor of science in education degree. Requirements for this degree are listed in the College of Education section of this catalog.

A teaching option is provided under the industrial technology program where the certification requirements are met by substitution of other courses for the entire block of restricted electives. Students interested in this option should declare their intent during the first quarter of their junior year in order that exact requirements for them can be determined.

The College of Fine Arts

Anthony Trisolini, *Dean*

Frances B. Inge, *Assistant Dean*

The College of Fine Arts includes the School of Architecture, Design and Planning; the School of Art; the School of Dance; the School of Music; the School of Theater; the Department of Comparative Arts, and the Program in Film. A broad, cultural education in the fine arts is offered, as well as specialized training in the following areas: architecture, graphic design, industrial design, interior design; art history, art education, ceramics, painting, photography, printmaking, sculpture; applied music, music education, music history and literature, music theory and composition, music therapy; acting, production, design, playwriting, general theater, theater education and children's drama.

Ohio University students requesting admission into major programs of the College of Fine Arts, or transfer students from other colleges and universities, are required to check with the director of the particular program regarding requirements for audition, submission of portfolio or other qualifications necessary for acceptance as a major in the area. This step is required of transfer students in addition to general acceptance for admission to the University.

The degrees granted by the School of Architecture, Design and Planning are the bachelor of arts, upon completion of the prescribed four-year curriculum in architecture, and bachelor of fine arts, upon completion of one of the prescribed design curricula. The bachelor of fine arts degree is granted upon the completion of a program in the School of Art, the School of Dance or the School of Theater. The School of

Music grants the bachelor of music degree.

Candidates for degrees in the College of Fine Arts complete the general graduation requirements of the University. Candidates for the bachelor of fine arts, bachelor of arts and bachelor of science degrees must complete a minimum of 180 quarter hours with a point-hour ratio of 2.0 (C) or better on all hours attempted, but including only the final hours and points in repeated courses. Candidates for the bachelor of fine arts degree must have a point-hour ratio of 2.0 or better on all hours in the field of specialization. For a student with transferred credit, this rule applies to his cumulative record, which includes transferred credits, and to his Ohio University record, exclusive of transferred credits. These requirements include the University College program.

The work of each student in the College of Fine Arts and its various schools will be reviewed no less than once a year by his faculty. When appropriate, the student will be notified of the faculty's assessment of his program and use of his talent. The notice will be commendation, warning or denial of further registration as a degree candidate in his school. In the event of denial, he is still free, subject to University regulations, to apply for transfer to another academic division of the University, and he may, subject to the regulations of that division, continue to register for course work in the College of Fine Arts on an elective basis.

Further, a student with outstanding qualifications may request from his adviser consideration for acceleration beyond regular requirements.

BACHELOR OF FINE ARTS AND BACHELOR OF MUSIC

The bachelor of fine arts and bachelor of music degrees fulfill four functions: to provide the student with specialized training in one of the fine arts; to provide a firm foundation for professional achievement; to provide a cultural background through a study of the relationship of all the arts, and to prepare the student, as far as possible, to become a responsible member of society. To these ends, the programs have been kept flexible to meet individual needs.

Those who are planning to teach in Ohio should fulfill the minimum requirements established for certification. Please refer to those portions of the catalog which describe the requirements for each area.

SCHOOL OF ARCHITECTURE, DESIGN AND PLANNING

The School of Architecture, Design and Planning includes the Department of Architecture, the Department of Design and the Department of Planning.

The basic objective of the school is to provide for each student a liberal education base and to develop his particular creative abilities to prepare him for the general practice of his design profession.

As each of the design professions represented in the school shares in the responsibility of man's visual environment, all basic and professional level design courses emphasize the interdisciplinary consideration of the solution of the environmental problems of society.

Work in the Department of Architecture leads to the four-year degree of bachelor of arts in architecture. The first professional architecture degree is the master of architecture, available after six years of study. (See Graduate Catalog.) Work in the Department of Design leads to a bachelor of fine arts. No undergraduate work is offered in the Department of Planning.

Successful work in the school is dependent upon regular participation in studio courses. Unless specific exception has been approved, the student is expected to work in

the studio during all regularly scheduled classes and the school reserves the right to reject any design work done outside of the studio. All work done in fulfillment of class requirements becomes the property of the school.

A minimum grade of C is required in design studio courses to assure automatic advancement to the next level studio. If the student falls below the grade of C or if, in the opinion of the faculty, the student does not exhibit sufficient motivation, the school reserves the right to refuse advancement to the next level design studio.

Because the design sequences in the school are continuous from the freshman year, attendance at institutions not offering these courses may not shorten the time required to complete the program of the school.

Architecture

The particular objective of the architectural curriculum is to prepare the student for the general practice of architecture by providing a liberal education base followed by a concentration in professional studies and a final in-depth specialization at graduate level. (See Graduate Catalog.)

The curriculum is divided into three two-year segments:

In the first two-year segment the student fulfills basic requirements of the University and University College and he is introduced to the humanities and social sciences through special courses designed to demonstrate the relevance of these particular subjects to architecture. This segment also is designed to heighten a student's awareness of his environment, to promote a basic understanding of the elements of this environment and to develop his ability to command the principles of basic design and the media techniques required to study and communicate ideas concerning this environment.

The second two-year segment presents intensified professional courses in structures, mechanical equipment, systems engineering, computer science and professional electives. At the same time, the liberal arts education is continued and broadened through the choice of electives.

Upon completion of the second segment the student may (upon acceptance of the Graduate Committee) enter the third two-year segment at the graduate-professional

level. At this time the student may specialize in architectural design, architectural history and theory or architectural programming. (See Graduate Catalog.)

Students entering the program in architecture should have sufficient mathematics background at the secondary school level to be able to enter directly into the study of calculus and they should have high school physics. All students are required to take the National Architectural Aptitude Test administered by the Educational Testing Service, Princeton, New Jersey. (Write to the director of the school for information.)

Freshman

EnvD 151 ..3	EnvD 152 ..3	EnvD 153 ..3
EnvD 301 ..4	EnvD 302 ..4	EnvD 303 ..4
Math 263A	Math 263B	Math 263C
or 140A5	or 140B5	or 213
Eng 170 series	Eng 170 series	or
or 180 series .5	or 180 series .5	Psv 3215
		InCo 1013

Sophomore

EnvD 251 ...3	EnvD 252 ...3	EnvD 253 ..3
EnvD 401 ...5	EnvD 402 ..5	EnvD 403 ..5
EnvD 471 ...3	EnvD 472 ..3	EnvD 462 ..3
Elective	EnvD 461 ..3	Elective
(humanities,	Elective	(humanities,
social science	(humanities,	social science
or natural	social science	or natural
science)* ..3	or natural	science)* ..3
Elective	science)* ..3	Elective
(humanities)		(humanities)
ties)*3		ties)3

Junior

Arch 301 ...6	Arch 302 ...6	Arch 303 ...6
Arch 361 ...4	Arch 362 ...4	CS 2535
Arch 363 ...3	Arch 364 ...3	Elective
Elective	Elective	(math,
(math,	(math,	science or
science or	science or	humanities)*5
humanities)*5	humanities)*5	Elective
		(humanities)
		ties)*4

Senior

Arch 401 ...6	Arch 402 ...6	Arch 403 ...6
Arch 451 ...3	Arch 452 ...3	CS 3085
Arch 461 ...4	Arch 462 ...4	Arch 463 ...4
Electives* ...5	Electives* ...5	Electives* ...5

* These courses to be selected with the help of the student's faculty adviser so as to best correct individual weaknesses and develop individual areas of strength.

The following areas are in the process of review. Students interested in graphic, industrial and interior design should write to Director, School of Architecture, Design and Planning.

Graphic Design

The curriculum in graphic design is planned to develop a broad range of sensitivity and understanding in order to use contemporary skills to accomplish design solutions. Since the graphic designer frequently becomes involved in the very core of the communication problem, his contribution may be great or small depending upon his grasp of the situation. The essence of the designer's unique contribution is his "thinking in relationships," his grasp of the verbal and graphic nature of the message in its totality.

The designer needs to develop the technical skills that will aid him in his creative image-making, but more importantly time must be spent on developing problem-solving attitudes. It is to these ends that the curriculum is directed. Courses in drawing, photography, illustration, marketing, advertising production and printing support the program. Graphic design courses include lettering, typography, film animation, packaging graphics, corporate identity design and media graphics in addition to core courses. Study in the humanities, sciences and other arts complete the program.

The program leads to the bachelor of fine arts degree.

Freshman

EnvD 151 ..3	EnvD 152 ..3	EnvD 153 ..3
EnvD 301 ..4	EnvD 302 ..4	EnvD 303 ..4
Eng 170 series	Eng 170 series	InCo 1013
or 180 series .5	or 180 series .5	CA 1193
CA 1173	CA 1183	Elective* ..2-5

Sophomore

EnvD 401 ..5	EnvD 402 ..5	EnvD 403 ...5
Eng elec ...5	Eng elec ...5	Copy-writing 5
Art 2283	Art 3283	Phot 1013
Art 2053	Art 3053	Silk-Screen ..3
CA 2313	CA 2323	CA 2333

Junior

Des 3316	Des 3326	Des 3336
Des 3344	Des 3354	Des 3364
Electives* ...6	Electives* ...6	Electives* ...6

Senior

Des 4316 Des 4326 Des 4336
Des 4344 Des 4354 Des 4364
Electives* ...6 Electives* ...6 Electives* ...6

* These courses to be selected with the help of the student's faculty adviser so as to best correct individual weaknesses and develop individual areas of strength.

Sophomore

EnvD 251 ..3 EnvD 252 ..3 EnvD 253 ..3
EnvD 401 ..5 EnvD 402 ..5 EnvD 403 ..5
EnvD 471 ..3 Elective* ..3-6 Elective* ..3-6
Elective* ...6 (math or (math or
(math or (social science) (social science)
social science) Elective* ...4 Elective* ...4
(design) (design)

Junior

Des 3316 Des 3326 Des 3336
Des 4274 Des 4284 Des 4294
Electives* ...6 Electives* ...6 Electives* ...6
(math or (math or (math or
social science) social science) social science)

Senior

Des 4316 Des 4326 Des 4336
Des 4244 Des 4254 Des 4264
Electives* ...6 Electives* ...6 Electives* ...6

* Electives chosen in consultation with faculty adviser to correct individual weaknesses and develop individual strengths and interests.

Industrial Design

The industrial design curriculum encompasses a series of coordinated design courses which develop the student's design sense and creative potential by continually sharpening and broadening his thought processes. Through a program of directed electives, each student is encouraged to supplement his major design instruction with concentrated study in the related fields of design, business, marketing and management, in order that he be prepared to assume future executive responsibilities. He should have the ability to communicate verbally as well as visually.

Industrial design relates machine-produced objects to man and the professional industrial designer works as a leading team member on the development of almost any object for everyday use. He studies the total impact of a probable object on its user, and creates from this viewpoint a useful object which improves the human environment.

Industrial design is thus an integrating activity in which different abstract data and points of view from technology, art, science and humanities are transformed and physically embodied into the form, structure and functions of a mass-produced object for practical and esthetic use.

The four year curriculum leads to a bachelor of fine arts degree and graduates will qualify for positions in industrial design offices, in various industries or as independent design consultants.

Freshman

EnvD 151 ..3 EnvD 152 ..3 EnvD 153 ..3
EnvD 301 ..4 EnvD 302 ..4 EnvD 303 ..4
Eng 170 series Eng 170 series InCo 101 ...3
or 180 series .5 or 180 series .5 Elective ...4-6
Elective ...4-6 (math or
(math or (math or
social social social
science) science) science)

Interior Design

The curriculum in interior design seeks to prepare the student to take his place as a professional specialist in the design of interior space and is approached through the study of basic architecture. As such, the interior designer expects to assume a responsible role among those who shape physical environment. His primary interest in the development of interiors is concerned with the social, historical and technical implications of those aspects of space, surface and material which distinguish his work. His training will enable him to develop a practice as a private consultant, as a designer of furniture or textiles and as a valuable associate of the environmental design team.

The School of Architecture, Design and Planning offers an environment in which the student can work closely with students in the associated design fields: architecture, industrial design and graphic design. The program includes those subjects which will best prepare the student for his career. During the third and fourth years, the interior design student specializes in courses that qualify him for work as a professional interior designer, capable of functioning in the commercial, residential and furniture design fields. The bachelor of arts in architecture is awarded after four years of study.

Freshman

EnvD 151 . .3	EnvD 152 . .3	EnvD 153 . .3
EnvD 301 . .4	EnvD 302 . .4	EnvD 303 . .4
Math 263A	Math 263B	Math 263C
or 140A5	or 140B5	or 213
Eng 170 series	Eng 170 series	or
or 180 series .5	or 180 series .5	Psy 3215
		InCo 101 . . .3

Sophomore

EnvD 251 . .3	EnvD 252 . .3	EnvD 253 . .3
EnvD 401 . .5	EnvD 402 . .5	EnvD 403 . .5
EnvD 471 . .3	EnvD 472 . .3	EnvD 462 . .3
Elective*3	EnvD 461 . .3	Elective*3
(humanities,	Elective*3	(humanities,
social science	(humanities,	social science
or natural	social science	or natural
science)	or natural	science)
Elective*3	science)	Elective*3
(humanities)		(humanities)

Junior

Arch 301 . . .6	Arch 302 . . .6	Arch 303 . . .6
Arch 367 . . .3	Arch 355 . . .3	Arch 484 . . .3
Elective . . .4-6	Elective . . .4-6	Elective . . .4-6
(Arch)	(Arch)	(Arch)
Elective* . .3-6	Elective* . .3-6	Elective* . .3-6
(humanities,	(humanities,	(humanities,
social science	social science	social science
or natural	or natural	or natural
science)	science)	science)

Senior

Arch 401 . . .6	Arch 402 . . .6	Arch 403 . . .6
Electives* .9-12	Electives* .9-12	Electives* .9-12

* These courses to be selected with the help of the student's faculty adviser so as to best correct individual weaknesses and develop individual areas of strength.

an extensive program and the junior and senior years a more intensive plan.

The BFA degree in the School of Art requires a minimum of 180 quarter hours. The BFA degree is offered with majors in painting, sculpture, ceramics, photography, printmaking, art education with certification and art history.

Studio Majors

Freshman

CA 1173	CA 1183	CA 1193
English5	English5	Art 1035
Art 1015	Art 1025	Electives . .7-9
Electives . .2-5	Electives . .2-5	

Sophomore

AH 3113	AH 3123	AH 3133
Art Major .3-5	Art Major .3-5	Art Major .3-5
Electives . .7-9	Electives . .7-9	Electives . .7-9

Junior

AH4	AH4	AH4
Art Major . .5	Art Major . .5	Art Major . .5
Electives . . .6	Electives . . .6	Electives . . .6

Senior

Art Major . . .5	Art Major . . .5	Art Major . . .5
Electives . .10	Electives . .10	Electives . .10

36 hours minimum in major; 18 hours minimum in AH beyond freshman level.

Art History Majors

Prospective art history majors should contact a member of the art history faculty at registration to assure proper planning to cover requirements.

Freshman

CA 1173	CA 1183	CA 1193
English5	English5	Art 1035
Art 1015	Art 1025	Electives . .7-9
Electives . .2-5	Electives . .2-5	

Sophomore

AH 3113	AH 3123	AH 3133
Studio Art . .3	Studio Art . .3	Studio Art . .3
Non-Art	Non-Art	Non-Art
electives . .9	electives . .9	electives . .9

(Attainment of a reading knowledge of at least one foreign language should be considered in the selection of electives in the sophomore year.)

SCHOOL OF ART

Henry H. Lin, *Director*

The studio foundation program is designed to familiarize students with basic art concepts and the language of form. Materials and methods and the production of art objects are considered secondary to the development of the individual and his involvement in the artistic process.

During the sophomore year studio courses will emphasize particular media relevant to the student's major interest. At this point he will, together with his adviser, determine for himself the course of study he will follow for the remaining two years. Thus the freshman and sophomore years constitute

Junior

AH Major ..4	AH Major ..4	AH Major ..4
Studio Art ..3	Studio Art ..3	Studio Art ..3
Non-Art electives ..8	Non-Art electives ..8	Non-Art electives ..8

Senior

AH Major ..8	AH Major ..4	AH Major ..4
Studio Art ..3	Studio Art ..3	Studio Art ..3
Electives ...4	Electives ...8	Electives ...8

36 to 45 hours in major beyond CA 119.

Art Education Majors

A student interested in teaching art at the elementary or secondary level follows a sequence of courses leading to the BFA degree in art education with certification. He should select at least 45 quarter hours in studio courses in two-dimensional and three-dimensional art, including a course in graphic communication; 27 quarter hours in art history and/or comparative arts except history of oratory and history of music, and at least ten quarter hours of electives in studio art or art history.

Freshman

CA 1173	CA 1183	CA 1193
English5	Psy 1015	English5
Art 1015	Art 1025	Art 1035
Electives ..2-5	Electives ..2-5	Electives ..2-5

Sophomore

AH 3113	AH 3123	AH 3133
Soc. Sci. ..3-5	Soc. Sci. ..3-5	EdSe 2504
Math2-5	Sci.2-5	Art3
Art3	Art3	Art3
Gfcd4	Psy 3755	Electives ..2-5

Junior

CA/AH ...3-4	CA/AH ...3-4	CA/AH ...3-4
EdPl 360 ...2	Art3	Art 4613
EdSe 351 ...5	Art3	Art3
Art3	Electives6	AH/Art Electives 3-4
Art3		Electives ...3

Senior

Art 4623	EdPl 461 ...6	AH/Art
AH/Art	EdPl 463 ...6	Electives 3-4
Electives 3-4	EdPl 465 ...3	AH/Art
Electives ...9		Electives 3-4
		Electives6
		EdSe 480 ...3

Students in art education should check carefully with their advisers, members of the art education faculty, to be certain their programs are correct. See the College of Education section for general and professional requirements for teacher certification.

Photography Majors

Candidates for the BFA degree electing photography as a major follow the regular sequence of photography courses during their freshman and sophomore years and advanced photographic courses during the junior and senior years.

A planned course of study should include courses in comparative arts and art history, design and drawing for technical information contributing directly to the major interest. From the general education field, courses should be chosen to fit individual needs.

Acceptance for Phot 205 is based upon submission of a portfolio of the applicant's photographs. Transfer students must submit a portfolio for evaluation for admission.

Prospective photography majors should contact a member of the photography faculty to assure proper planning to cover requirements.

Freshman

CA 1173	CA 1183	CA 1193
Phot 101 ...3	Art 1025	Art 1035
Art 1015	English5	Electives ..7-9
English5	Electives ..2-4	

Sophomore

AH 3374	AH 3384	AH 3394
Phot 205 ...5	Phot 206 ...5	Phot 207 ...5
Electives ...6	Electives ...6	Electives ...6

Junior

Phot Major .5	Phot Major .5	Phot Major .5
AH 3113	AH 3123	AH 3133
Electives ..7-9	Electives ..7-9	Electives ..7-9

Senior

Phot Major .5	Phot Major .5	Phot Major .5
Electives ...10	Electives ...10	Electives ...10

30 hours minimum in the major beyond 207. 18 hours minimum in AH beyond freshman level.

SCHOOL OF DANCE

Shirley Wimmer, *Director*

The School of Dance offers an undergraduate major program leading to a bachelor of fine arts degree, which includes

work in performance, choreography, the history and ethnology of dance, and dance education. There are opportunities for production and experimentation with the Ohio University Dance Company, which tours the surrounding region. Additional experience is gained from workshops and programs interrelated with the other schools in the College of Fine Arts. Visiting artists are in residence during the year and choreograph works for student performances.

There is a growing demand for qualified graduates of dance major curricula to teach at all educational levels. Within the school, majors are encouraged to gain practical teaching experience by assisting in class instruction. The curriculum provides a foundation upon which the student may build a career as a performer, choreographer, scholar or teacher; it also prepares him for advanced professional studies.

Major in Dance—Suggested Plan

Freshman	
Danc 101-102-103	15
Danc 111	2
Bot or Zool 101	5
Eng	15
ThAr 130 A-B-C	9
Sophomore	
Danc 201-202-203	15
Danc 212	2
Danc 250-255	4
Zool 301	6
ThAr 215	3
Electives*	15
Junior	
Danc 301-302-303	15
Danc 351, 352 or 353	4
Danc 480	2
HPER 329	4
Electives*	20
Senior	
Danc 401-402-403	15
Danc 441-442-443	6
Danc 240	3
Danc 471	4
Electives*	17

ELECTIVES* will be chosen from the following fields: anthropology, history, language other than English, philosophy, psychology, art studio, art history, comparative arts, film, music performance, music history, theater history.

SCHOOL OF MUSIC

Clyde Thompson, *Director*

The curricula of the School of Music are designed to prepare students for careers in teaching, music therapy or performance. The School of Music makes provision for individual study in all branches of vocal and instrumental music and offers a wide range of courses in the fields of theory or composition, music history and literature, music education and music therapy. Opportunities are provided for individual participation in student recitals as well as for performing experience in the various organizations, such as the University Chorus, the University Orchestras, the Bands, Opera Workshop, Jazz Ensemble, the Glee Clubs, as well as many small chamber ensembles.

Students who specialize in music education may elect either an instrumental or a vocal emphasis. Upon completion of the requirements of the music education program, which includes the requirements of the State Board of Education, the student receives the Ohio Special Certificate for teaching music.

Students in the College of Arts and Sciences may major in one of two areas — music history and literature or music theory. The associate director of the School of Music should be consulted as the adviser of the course.

All new students intending to major in music, both freshmen and transfer students, are expected to audition on their principal instrument or voice as part of the admission process. An appointment for an audition and information concerning proficiency requirements may be secured by contacting the director of the School of Music. Those students who are accepted but do not meet the required level of proficiency in their principal instrument may be placed in small classes with students of comparable ability until the required level of proficiency is reached.

A music theory placement examination is required of all new students. This examination is given each day during precollege counseling and on registration day at the beginning of each quarter. Specific times

and locations for this examination may be obtained from the School of Music office.

The Ohio University School of Music is a member of the National Association of Schools of Music. The requirements for entrance and for graduation as set forth in this Ohio University Bulletin are in accordance with the standards set up by the association.

The following course plans, culminating in the bachelor of music degree, outline a practical sequence of required courses which should be of assistance to the student in planning his course of study. Each student in the School of Music will elect an appropriate performing group consistent with his major each quarter that he is in residence.

Major in Piano

Freshman

Elective ...4-5	Elective ...4-5	Elective ...4-5
Humanities	Humanities	Humanities
elective .3	elective .3	elective .3
Mus 101 ...3	Mus 102 ...3	Mus 103 ...3
Mus 341 ...4	Mus 341 ...4	Mus 341 ...4
Perf group .1	Perf group .1	Perf group .1
Mus 900	Mus 900	Mus 900

Sophomore

Mus 201 ...3	Mus 202 ...3	Mus 203 ...3
Mus 204 ...3	Mus 205 ...3	Mus 206 ...3
Mus 321 ...3	Mus 322 ...3	Mus 323 ...3
Mus 341 ...5	Mus 341 ...5	Mus 341 ...5
Perf group .1	Perf group .1	Perf group .1
Mus 900	Mus 900	Mus 900

Junior

Mus 4511	Mus 4511	Mus 4511
Theory Elec .2	Theory Elec .2	Theory Elec .2
Mus 3415	Mus 3415	Mus 3415
Elective3	Elective3	Elective3
Perf group .1	Perf group .1	Perf group .1
Mus 900	Mus 900	Mus 900
Mus 421* .3	Mus 421* .3	Mus 421* .3
		Recital0

Senior

Mus 4522	Mus 4532	Mus 4542
Mus 3416	Mus 3416	Mus 3416
Elective6	Elective6	Elective6
Perf group .1	Perf group .1	Perf group .1
Mus 900	Mus 900	Mus 900
		Recital0

Major in Voice

Freshman

Ital 1114	Ital 1124	Ital 1134
InCo 101 ...3	Elective3	Elective3
Mus 101 ...3	Mus 102 ...3	Mus 103 ...3
Mus 3404	Mus 3404	Mus 3404
Mus 341 or	Mus 341 or	Mus 341 or
Mus 141 .1	Mus 142 .1	Mus 143 .1
Perf group .1	Perf group .1	Perf group .1
Mus 900	Mus 900	Mus 900

Sophomore

Mus 201 ...3	Mus 202 ...3	Mus 203 ...3
Mus 204 ...3	Mus 205 ...3	Mus 206 ...3
Mus 3404	Mus 3404	Mus 3404
Mus 341 or	Mus 341 or	Mus 341 or
Mus 241 .1	Mus 242 .1	Mus 243 .1
Perf group .1	Perf group .1	Perf group .1
Mus 900	Mus 900	Mus 900
Ger 1114	Ger 1124	Ger 1134

Junior

Mus 321 ...3	Mus 322 ...3	Mus 323 ...3
Fr 1114	Fr 1124	Fr 1134
Theory	Theory	Theory
elective .2-3	elective .2-3	elective .2-3
Mus 3404	Mus 3404	Mus 3404
Perf group .1-3	Perf group .1-3	Perf group .1-3
Mus 900	Mus 900	Mus 900
		Recital0

Senior

Mus 421A .3	Mus 421F .3	Elective8
Mus 3404	Mus 3404	Mus 3404
Mus elective .3	Mus elective .3	Mus elective .3
Perf group .1-3	Perf group .1-3	Perf group .1-3
Mus 900	Mus 900	Mus 900
Elective5	Elective5	Recital0

Demonstration of piano proficiency is required.

*May be taken in junior or senior year; should include 421A and 421F.

Major in Orchestral Instruments

Strings, Woodwinds, Brass or Percussion

Freshman

Elective4	Elective4	Elective4
Humanities	Humanities	Humanities
elective ...3	elective ...3	elective ...3
Mus 101 ...3	Mus 102 ...3	Mus 103 ...3
Maj instr ...2	Maj instr ...2	Maj instr ...2
Mus 341 or	Mus 341 or	Mus 341 or
Mus 141 .1	Mus 142 .1	Mus 143 .1
Band/orch .1	Band/orch .1	Band/orch .1
Mus 900	Mus 900	Mus 900
Chamber	Chamber	Chamber
music1	music1	music1

*May be taken in the junior or senior year, and should include 421B and 421C.

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Sophomore

Mus 2013	Mus 2023	Mus 2033
Mus 2043	Mus 2053	Mus 2063
Mus 3213	Mus 3223	Mus 3233
Maj instr ..5	Maj instr ..5	Maj instr ..5
Mus 341 or	Mus 341 or	Mus 341 or
Mus 241 ..1	Mus 242 ..1	Mus 243 ..1
Band/orch ..1	Band/orch ..1	Band/orch ..1
Mus 900	Mus 900	Mus 900
Chamber	Chamber	Chamber
music1	music1	music1

Junior

Mus 3013	Mus 3023	Mus 3033
Mus 4553	Mus 4573	Elective3
Mus 4583	Mus 421*3	Mus 421*3
Maj instr ..5	Maj instr ..5	Maj instr ..5
Elective2	Band/orch ..1	Band/orch ..1
Band/orch ..1	Mus 900	Mus 900
Mus 900	Chamber	Chamber
Chamber	music1	music1
music1		Recital0

Senior

Mus 4072	Mus 4082	Mus 4092
Maj instr ..6	Maj instr ..6	Maj instr ..6
Mus 4813	Mus	Mus 4592
Elective**3	304/305 ..3	Elective**3
Band/orch ..1	Elective**3	Band/orch ..1
Mus 900	Band/orch ..1	Mus 900
Chamber	Mus 900	Chamber
music1	Chamber	music1
	music1	Recital0

Demonstration of piano proficiency is required.

*May be taken in junior or senior year; should include 421C and 421D.

**Suggested electives are: composition, instrumentation, orchestration and conducting.

Major in Organ

Freshman

Eng5	Eng5	Elective5
CA 1173	CA 1183	CA 1193
Mus 1013	Mus 1023	Mus 1033
Mus 3432	Mus 3432	Mus 3432
Mus 3411	Mus 3411	Mus 3411
Perf group ..1	Perf group ..1	Perf group ..1
Mus 900	Mus 900	Mus 900

Sophomore

Mus 2013	Mus 2023	Mus 2033
Mus 2043	Mus 2053	Mus 2063
Mus 3213	Mus 3223	Mus 3233
Mus 3432	Mus 3432	Mus 3432
Mus 340 or	Mus 340 or	Mus 340 or
Mus 147 ..1	Mus 148 ..1	Mus 149 ..1
Elective3	Elective3	Elective3
Perf group ..1	Perf group ..1	Perf group ..1
Mus 900	Mus 900	Mus 900

Junior

Mus 3013	Mus 3023	Mus 3033
CA3	CA3	CA3
Mus 421*3	Mus 421*3	Mus 421*3
Mus 4553	Mus 4563	Mus 4013
Mus 3434	Mus 3434	Mus 3434
Perf group ..1	Perf group ..1	Perf group ..1
Mus 900	Mus 900	Mus 900

Senior

Mus 3433	Mus 3433	Mus 3433
Mus 4984	Mus 4984	Mus 4984
Elective** ..7	Elective** ..1	Elective** ..7
Perf group ..1	Perf group ..7	Perf group ..1
Mus 900	Mus 900	Mus 900

*May be taken in the junior or senior year and should include 421E.

**Suggested electives: counterpoint, composition, French, German, philosophy or Bible as literature; 9 qtr hrs of the elective must be in theory.

Major in Theory or Composition

Freshman

Eng5	Eng5	InCo 1013
CA 1173	CA 1183	CA 1193
Mus 1013	Mus 1023	Elective2
Maj instr2	Maj instr2	Mus 1033
Sec instr1	Sec instr1	Maj instr2
Perf group ..1	Perf group ..1	Sec instr1
Mus 900	Mus 900	Perf group ..1
		Mus 900

Sophomore

Mus 2013	Mus 2023	Mus 2033
Mus 2043	Mus 2053	Mus 2063
Mus 3213	Mus 3223	Mus 3233
Elective3	Elective3	Elective3
Maj instr2	Maj instr2	Maj instr2
Sec instr1	Sec instr1	Sec instr1
Perf group ..1	Perf group ..1	Perf group ..1
Mus 900	Mus 900	Mus 900

Junior

Mus 3013	Mus 3023	Mus 3033
Mus 4072	Mus 4082	Mus 4092
Mus 421*3	Mus 421*3	Mus 421*3
Mus 3102	Mus 3112	Mus 3122
Maj instr2	Maj instr2	Maj instr2
Elective3	Elective3	Elective3
Perf group ..1	Perf group ..1	Perf group ..1
Mus 900	Mus 900	Mus 900

Senior

Mus 3043	Mus 3053	Mus 3063
Mus 4013	Electives9	Electives6
Perf group ..1	Perf group ..1	Perf group ..1

Fine Arts

Mus 498** ..2	Mus 498** ..2	Mus 498** ..2
Mus 410*** ..2	Mus 411*** ..2	Mus 412*** ..2
Electives6	Mus 900	Mus 900
Mus 900		

Demonstration of piano proficiency is required.

*May be taken in junior or senior year.

**Required of theory majors. The senior project will be subject to an oral review by the Theory Department.

***Required of composition majors.

Major in Music History and Literature

Freshman

Eng5	Eng5	InCo 101 ...3
CA 1173	CA 1183	CA 1193
Mus 1013	Mus 1023	Mus 1033
Maj instr ...2	Maj instr ...2	Maj instr ...2
Sec instr ...1	Sec instr ...1	Sec instr ...1
Perf group ..1	Perf group ..1	Perf group ..1
Mus 900	Mus 900	Mus 900

Sophomore

Mus 2013	Mus 2023	Mus 2033
Mus 2043	Mus 2053	Mus 2063
Mus 3213	Mus 3223	Mus 3233
Elective3	Elective3	Elective3
Maj instr ...2	Maj instr ...2	Maj instr ...2
Sec instr ...1	Sec instr ...1	Sec instr ...1
Perf group ..1	Perf group ..1	Perf group ..1
Mus 900	Mus 900	Mus 900

Junior

Mus 3013	Mus 3023	Mus 3033
Fr/Ger4	Fr/Ger4	Fr/Ger4
Mus 4213	Mus 4213	Mus 4213
Maj instr ...2	Maj instr ...2	Maj instr ...2
Hist 1013	Hist 1023	Hist 1033
Perf group ..1	Perf group ..1	Perf group ..1
Mus 900	Mus 900	Mus 900

Senior

Mus 4213	Mus 4213	Mus 4213
Fr/Ger4	Fr/Ger4	Fr/Ger4
Perf group ..1	Perf group ..1	Perf group ..1
Mus 900	Mus 900	Mus 900
Elective8	Elective8	Elective8

Demonstration of piano proficiency is required.

Major in Music Education

All music education majors will take the following courses:

Theory

Mus 101, 102, 103	9
Mus 201, 202, 203	9
Mus 204, 205	6

Mus 206	3
Mus 304	3
Mus 401	3

History

Mus 321, 322, 323	9
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Applied Music

Principal instrument	22
Secondary instrument	6
Major performing group	11
(minimum 1 group each quarter)	
Mus 90-11 quarters	0

Music Education

Mus 364	3
Mus 468	3

Demonstration of piano proficiency is required in all music education programs.

Instrumental emphasis programs include additionally:

Mus 147, 148, 149	3
Mus 261-3 quarters	6
Mus 263-6 quarters	12
Mus 455, 457	6

Vocal emphasis programs include additionally:

Mus 365	3
Mus 366	3
Mus 261-2 quarters	4
Mus 263-3 quarters	6
Mus 455, 456	6
If piano is principal instrument,	
Mus 451-3 quarters	3

Professional requirements:

Psy 375	5
EdSe 250	4
EdPl 360 or 361	2
EdSe 351	5
EdPl 461 and 463	12
EdPl 465	3
EdSe 480	3
Physical education	3

General education:

Students must complete a total of 45 quarter hours of general education. These hours must include:

1. 1 course each in science and mathematics
2. 2 courses in humanities
3. Psy 101 and 1 other social science course
4. 2 courses in English, or in modern foreign language
5. InCo 103 unless waived on basis of a high school speech course
6. Additional hours in any of 1 through 4 to total the required 45 hours.

Course plans outlining a practical sequence of required courses can be found in the School of Music Student Handbook.

Major in Music Therapy

The music therapy curriculum is designed to meet the degree requirements of the College of Fine Arts and the National Association for Music Therapy.

In addition to the course work, the student must complete Mus 480, Clinical Experience II (six-month internship) at an approved hospital for the training of music therapists. He then is eligible for listing with NAMT as a Registered Music Therapist (RMT).

Freshman

Mus 1013	Mus 1023	Mus 1033
Bot or	Zool 1035	Mus 2813
Zool 101 ..5	Eng5	Eng5
InCo 101/103	Maj instr ...2	Maj instr ...2
205/334 3-4	Sec instr ...1	Sec instr ...1
Maj instr. ...2	Perf group ..1	Perf group ..1
Sec instr1	Mus 900	Mus 900
Perf group ..1	HPER1	HPER1
Mus 900		
HPER1		

Sophomore

Mus 2013	Mus 2023	Mus 2033
Mus 2043	Mus 2053	Mus 2063
Psy 1015	Psy 3755	Soc 1015
Mus 2612	Maj instr ...2	Maj instr ...2
Maj instr ...2	Sec instr1	Sec instr1
Sec instr1	Perf group ..1	Perf group ..1
Perf group ..1	Mus 900	Mus 900
Mus 900		

Junior

Mus 3813	Mus 3823	Mus 3833
Mus 4553	Electives ..8-9	Mus 2632
Mus 3213	Mus 3223	Mus 3233
Psy 4755	Maj instr ...1	Psy 4325
Maj instr ...1	Perf group ..1	Maj instr ...1
Perf group ..1	Mus 900	Perf group ..1
Mus 900		Mus 900

Senior

Mus 3043	Mus 4813	Mus 4823
Soc elec-	Mus 4683	Soc elec-
tive3-4	EdSp 271/	tive3-4
Mus 3663	2723	Elective3
Mus 2632	Mus 2632	Mus 2632
Maj instr ...1	Maj instr ...1	Maj instr ...1
Perf group ..1	Perf group ..1	Perf group ..1
Hum Elec ...3	Hum Elec ...3	Hum Elec ...3
Mus 900	Mus 900	Mus 900

Demonstration of piano proficiency is required.

All students will take additionally Mus 380 (1 hour).

SCHOOL OF THEATER

John A. Walker, *Director*

The School of Theater provides a full range of courses in historical, critical, interpretive, creative and technical aspects of drama and theater arts. Six undergraduate majors are offered, a general theater major for students wishing a broad education, theater education for secondary school teacher trainees and intensive professional programs in acting, children's drama, playwriting and production design.

Students in theater are required to take part in the production activities of the University Theater in supplementation and extension of classroom experiences. In the summer, additional opportunities are available with the Ohio Valley Summer Theater, a joint community-University organization, and the Monomoy Theater sponsored by the University at Chatham, Massachusetts, on Cape Cod.

Excellence in scholarship and performance is recognized by a number of annual awards, such as the Irma E. Voigt memorial award of Sigma Kappa to a senior girl for outstanding achievement in theater, and the University Theater awards given for superior contributions in acting and production.

Majors in the School of Theater

General theater, theater education and the various professional majors follow approximately the same program during the first two years. Not later than the end of the sophomore year, the student must indicate his intended major sequence and petition through his adviser for admission to that specialized program. The faculty will rule on the petition and may, if desired, request audition or other demonstration of the student's potential in the chosen area.

All majors are expected to achieve basic proficiency in production techniques and skills. Additionally they are required to demonstrate satisfactory mastery of fundamentals of vocal and physical action consistent with their career goals and objectives.

Students intending to major in the School of Theater should enroll for ThAr 115A,B,C, 116A,B,C and 130A,B,C during the freshman year. Additionally they should take one course selected from Eng 177, 178, 179, 187, 188, 189 and begin one or more sequences necessary to satisfy the general education requirement. This specifies not fewer than eight quarter hours in each of four of the following five groups:

Group One — Modern language, philosophy, great books, English (beyond basic requirement).

Group Two — Physics, chemistry, geology, mathematics, physical science, zoology, botany, astronomy.

Group Three—Sociology, anthropology, economics, geography, government, history, psychology.

Group Four — Applied music; dance theory, practice and technique; art (practice and technique of drawing, painting, motion pictures, sculpture, photography, etc.).

Group Five — Historical and theoretical courses in motion picture, dance, art, music, architecture, photography, comparative arts; interpersonal communication; radio-television; journalism; hearing and speech sciences.

Academic credit is required of all theater majors in conjunction with the School of Theater production program which functions as a laboratory application of classroom theory. This credit must consist of at least one hour in ThAr 434 (Practicum in Production Design) and one hour in ThAr 405 (Practicum in Management), 415 (Practicum in Acting) or 465 (Practicum in Directing). Each theater major must register for at least two practicums in each year in residence on the Athens campus, but not more than 18 hours of practicum credit will count toward graduation. Practicum hours of credit will depend on the scope of the responsibility requested by the student and authorized by the faculty supervisor on the basis of the following scale:

- 4 cr. — Faculty supervised direction, design or a "super-role," etc.
- 3 cr. — Stage manager, assistant director, major roles, etc.
- 2 cr. — Supporting roles, crew heads, etc.
- 1 cr. — Minor roles, crews, etc.

Students relocating from branch campuses, transferring from other institutions or wishing to enter a major program at the advanced undergraduate level must make arrangements with the School of Theater for audition, interview, submission of portfolio or other appropriate screening to determine eligibility for the particular sequence which they wish to enter.

Once admitted to the specialized program, each student will be observed and advised by the staff, and his progress will be formally reviewed at periodic intervals. At the end of any quarter the student may be recommended for transfer to another major sequence, required to modify his program or denied further enrollment as a degree candidate in the School of Theater.

Basic Requirements for All Theater Majors

ThAr 115A,B,C: Voice for Stage	6
ThAr 116A,B,C: Body Training	6
ThAr 130A,B,C: Technical Production	9
ThAr 215: Principles of Acting	3
ThAr (or InCo) 220: Oral Interpretation...	3
ThAr 337: Basic Makeup	1
ThAr 370, 371, 372: Theater History	9
ThAr 460: Directing I	3
ThAr 470 to 477: (two history courses)	8*

*Except theater education majors

Specialized Program Requirements

Beyond the broad requirements listed above, each student must take the following additional courses for the specified major.

General Theater (5131)

ThAr 315: Intermediate Acting I	3
ThAr 461: Directing II	3
Theater arts electives above 300	24
Total advanced theater arts credits	30

Acting (5132)

ThAr 311: Stage Speech (3 qtrs)	6
ThAr 312: Stage Movement (3 qtrs)	6
ThAr 315: Intermediate Acting I	3
ThAr 316: Intermediate Acting II	3
ThAr 310A, B, C: Acting Studio	24
ThAr 410A, B, C: Adv. Acting Studio	24
Total advanced theater arts credits	66

Children's Drama (5133)

ThAr 340: Dram. Lit. for Children	3
ThAr 440: Children's Theater	3
ThAr 441: Creative Dramatics	3
ThAr 541: Pract. Creative Dramatics	4
ThAr 525: Pract. School Theater	1
Theater arts and related electives	46
Total advanced credits	60

Playwriting (5135)

ThAr 315: Intermediate Acting I	3
ThAr 350: Playwriting	5
ThAr 450: Adv. Playwriting	5
ThAr 451: Playwr. Workshop (3 qtrs)	9
ThAr 575: Dram. Criticism I	4
ThAr 576: Dram. Criticism II	4
Advanced theater arts and creative writing credits	30*
Total advanced credits	60

*Six credits in creative writing courses outside theater

Production Design (5134)

ThAr 330A, B, C: Stagecraft	9
ThAr 332: Theatrical Rendering	3
ThAr 333: Basic Theater Design	4
ThAr 430: Adv. Stagecraft	4
ThAr 431: Theory of Lighting	4
ThAr 432: Props and Spec. Effects	4
ThAr 433: Scene Design	4
ThAr 435: History of Costume	4
ThAr 436: Costume Design	4
Theater arts production design electives	20
Total advanced theater arts credits	60

Theater Education (5136)

Students in the College of Fine Arts or in the College of Education may secure the Ohio Secondary Certificate in Speech with theater emphasis by taking basic theater requirements listed earlier and the following courses plus additional work in education and related fields required for teacher certification. (See the College of Education section for general and professional requirements.)

ThAr 340: Dram. Lit. for Children	3
ThAr 421-422: Methods of Tchg. Theater I, II	5
ThAr 434: Pract. Production Design (Minimum)	1*
ThAr 440: Children's Theater	3
ThAr 441: Creative Dramatics	3
ThAr 461: Directing II	3
ThAr 525: Pract. School Theater (Minimum)	1*
ThAr 541: Adv. Creative Dramatics	4
InCo 101: Fundamentals of Speech	3
InCo 103: Public Speaking	4
InCo 334: Intro. to Communication Process	3
R-TV 310, 370, 440, 441 (1 course)	4

Students in theater education must check carefully each quarter with their advisers regarding second teaching field and to be certain their programs are correct. It may be necessary to take one or more additional quarters to meet all requirements.

*In lieu of practicum requirements for all other theater majors.

Additional Curricula and Programs

CENTER FOR AFRO-AMERICAN STUDIES

Harry Morgan, *Dean*

Ohio University established the Black Studies Institute in the fall of 1969 as an important part of its effort to alter the trend of higher education as it deals with the black experience in our country's past, present and future. One year later the department expanded and the official name was changed to the Center for Afro-American Studies with the Black Studies Institute being only one of the many programs within the center.

The Black Studies Institute

The Black Studies Institute offers academic programs leading to bachelor's and master's degrees. The programs provide a black perspective on such disciplines as history, psychology, sociology, education and the humanities. Courses of study are designed to meet the individual student's wants and needs. There are few standard course requirements for the degrees; instead, each student, with the guidance of his adviser, plans a course of study which will follow his interests. An extremely flexible independent studies plan permits the student to do research or serve an internship, either on or off the campus. In an effort to move away from traditional letter grading, a portion of the student's progress will be evaluated by using a portfolio system. Because of his in-

creased sensitivity to the black man in contemporary society, and understanding of him, the student — be he black or white — should be prepared upon graduation to be a catalyst for change and betterment in his community.

Undergraduate admission to the institute may be made during the freshman, sophomore, junior or, in exceptional cases, senior year. Because the degree programs are highly individualized, early enrollment is advised. When the application is returned, an interview is set up with an institute staff member to determine if the student is suited to the academic program.

Graduate applications will be considered by a panel composed of students, faculty and staff. Admission will be based upon the applicant's expressed desire and ambition and his outline of a clear goal. The master's degree is primarily a research degree. The student is involved in discovering relevant information about black people through degree-granting disciplines such as history, government, education or other appropriate areas. Work for the master's degree takes six quarters to complete. A portion of graduate study is field work which may be done off campus.

The Resource Center

The Resource Center provides services to meet the needs of the black community. The small house has a friendly walk-in atmosphere. A comfortable living room, supplied with magazines, newspapers and music, offers students a place to lounge in their

free hours. The Resource Center also provides academic, occupational, financial and personal counseling, and a free tutoring service. With the help of students, a newspaper, "Afro-American Affairs," is published bi-monthly. The center sponsors and organizes weekly social gatherings, workshops, guest speakers and symposiums and music and art performing groups for the entire community.

Except for several full-time staff members to coordinate projects, the Resource Center is largely operated by students, thereby providing a variety of jobs for students who wish to work. The success of the Resource Center, therefore, depends largely upon the enthusiasm of the student-workers.

Requirements for Degree in Afro-American Studies

The bachelor of science degree in Afro-American studies is granted upon completion of the Ohio University graduation requirements of 180 quarter hours, which includes 40-60 hours in black studies. A student must have a minimum point-hour ratio of 2.0 (C) on all hours attempted to qualify for graduation. In addition to the above, the student must successfully complete a minimum of:

- A. Ten hours selected from among the following:
 - Introduction to Afro-American History
 - Afro-American Socio-Economic Development
 - Introduction to Black Social Development
 - The Black Community in the 20th Century
 - History and Psychology of Colonialism
- B. Five hours of independent study. The nature of this study will be determined by the student and his major adviser usually in the junior or senior year.

The heart of our program—what really makes it work—is the advising process. Each student will work closely with a faculty or staff member whose capabilities are related to the student's career choice. Together they will plan a course of study which will include a core of suggested requirements in the Black Studies Institute.

THE HONORS COLLEGE

Ellery Golos, *Director*

The Honors College attempts to provide at Ohio University the most flexible and challenging education possible both to the academically gifted and to the creative student. Through especially designed courses, detailed counselling, library privileges, preferred registration, close contact with faculty and distinguished visitors and individualized career planning the Honors College attempts to combine the values of the small college with the resources of a large state university.

Admission

The Honors College limits its enrollment to about five percent of the student body; it must, therefore, make a strong effort to identify those students who can most profit from its resources. Because no infallible selection procedure has been developed, admission to the Honors College is kept as flexible as possible.

Any student may apply for admission to the Honors College at the end of his freshman year, at any time during his sophomore or junior year or during the first term of his senior year upon forms available at the Honors College Office. The selection procedure attempts to predict whether or not the applicant will profit from the freedom and the intensity of honors work. Academic performance is considered an important predictor in such an evaluation and a 3.0 accum is used as a minimum standard of such performance. However, faculty recommendations, evidence of unusual abilities in those areas of experience not open to grading procedures and the nature of the applicant's desire to do honors work are even more heavily weighed in the consideration of each application, so that it is possible for a student with less than a 3.0 to be admitted.

Admission requirements differ at each class level; admission of seniors, for example, depends entirely upon the evaluation which the applicant's major department places upon the research project he presents (see below Departmental Honors).

Once admitted, a student may remain in the college as long as he feels it is making a real contribution to his education. The student, however, who follows a degree program whose requirements are so ordered as to make it impossible for him to take any significant part in the Honors College may decide to resign to make room for someone else. If a student's record falls far below his potential for a significant period, or if a review of his work shows that he is obviously not participating in the program, he may be invited to discuss the advisability of not continuing in the college. Each student should be aware that a 3.0 accum and 18 hours in 450's are required for graduation with "Honors in General Studies." (see below)

Freshman Program

Although admission to the Honors College comes at the beginning of the sophomore year, promising freshmen (about five percent of the entering class) are invited to participate in special freshman seminars which satisfy the freshman English requirement. Enrolling 15 students each, these freshman seminars seek to encourage individual initiative in the pursuit of a number of special problems. In the past, seminars have begun their study with such works as Boulding's *The Twentieth Century* and McLuhan's *Understanding Media* and move from such general considerations into specific problems of interest to the individual student. More recently, seminars have begun with works such as S. Carmichael's *Black Power*, Faulkner's *Go Down Moses*, Baldwin's *Another Country* and Silberman's *Crisis in Black and White*. Later seminars also study the general problem of separation and alienation in literature throughout history—from Sophocles to Joseph Heller.

Honors sections in mathematics and physics are available to students with appropriately high SAT scores. Usually these students will receive invitations to enroll in the specific honors sections. Further information will be available at the precollege meeting in the summer.

Each student enrolled in these honors courses is given careful consideration as a potential Honors College student.

Sophomore Program

Students admitted to the Honors College as sophomores have the opportunity to enroll in honors sections in certain basic fields (e.g., English, philosophy, history, government, mathematics, economics, education, physics and others). These small, specially designed sections may be used to satisfy the honors student's requirements or allow him to pursue his own interests with greater flexibility and freedom.

Sophomores should not register for 450 courses. If vacancies occur, students may be admitted by change order at registration. Generally speaking, the 297, 298, 299's are considered as prerequisites to the 450's.

Junior-Senior Program

The honors student may follow one of two programs in his junior and senior years. He may elect to carry out extensive research in his area of specialty or he may choose to do his honors work in "general studies." An English major, for instance, might follow the former course (see below Departmental Honors) and graduate with "Honors in English." He might, on the other hand, choose to complete his English major while taking approximately 18 hours of Honors College 450 (see below Honors in General Studies) to graduate with "Honors in General Studies."

Whether a student chooses to follow the general studies sequence or departmental honors depends, then, upon whether he feels he most wants to carry out sustained independent research or whether he wishes to explore a series of provocative problems outside his major field. Upon occasion, students may combine the two programs.

Departmental Honors

Admission to work in departmental honors is controlled solely by the department concerned. If a student not in the Honors College applies for and is granted admission into a departmental honors program, he is automatically admitted to the Honors College. A student already in the Honors College must also apply to his major department for admission to departmental honors. Work in departmental honors, in other

words, must be initiated by the student and must be approved by his department. The Honors College is concerned only that the student register a description of his project and the name of his adviser on the forms available at the college. Most departments require a 3.0 accumulative average for admission to departmental honors.

Students who choose to follow departmental honors elect a total of approximately 15 or 18 hours during their junior and senior years under whichever course number their major department lists its research or independent study course (e.g., Phil 491, Math 491, etc.). A recent ruling of the University Curriculum Council makes it possible for a student to take as many as 15 hours of his independent study in any one quarter, on or off the campus. A typical pattern followed by those who elect this method is to elect three hours of independent study in order to develop an appropriate project and a suitable method of carrying it out. Once a detailed plan for the project has been formulated, the student takes the responsibility of selecting an adviser and convincing him and his department that this research could and should be done in one 15 hour grouping. Most students electing departmental honors, however, spread their 15 credit hours of independent work throughout their junior and senior years in whatever pattern best suits them and their advisers.

Depending on the wishes of the department concerned, the student completes his work in departmental honors by submitting an honors paper or a description of an honors project. Generally, the department conducts an oral examination on the project.

A sampling of titles of honors projects recently completed may give some idea of the scope and variety possible under this plan: *Radiation Simulation for Fallout Shelter Testing*, *Secularism and the American Way of Life*, *The Phenology of an East- and a West-Facing Slope*, *A Comprehensive Analysis of the Freedom of Information Bill*, *The Impact of Electronic Data Processing on Auditing*, *Mexico: Agrarian Reform in the Twentieth Century*, *The Development of Faust and His Relationship to Mephistopheles in Three Stages of Goethe's Faust*, *An Investigation of the Radar Hill Laboratory's Frequency Synthesizer and Some Reactions of Dibenzothiophene*.

The final copy of the paper or project

description must be submitted to the Honors College for its approval and subsequent filing in the University library two weeks before the date of graduation. A description of the proper format for the paper is available at the Honors College.

In the event that a paper is not completed, the instructor will give an appropriate grade for the research actually completed. An incompleting project, of course, will not enable the student to graduate from the Honors College.

Students enrolled in departmental honors are eligible to take the honors seminars (see below Honors in General Studies) if there is room available for them.

Honors in General Studies

Because not every honors student wishes to concentrate his studies in one department, the Honors College offers an alternative to the departmental honors program called "Honors in General Studies." Instead of spending 15 to 18 credit hours in independent research during his junior and senior years, the student who chooses general studies elects six Honors College Seminar 450 courses during his final two years. The student's final transcript, then, may show as many as six different courses offered by different departments and colleges taken under the same course number, Honors College 450 (e.g., Honors College 450: General Systems, Honors College 450: Figure and Metaphor, etc.).

Each term the Honors College offers a series of seminars, some of which are repeated for several terms, some of which are offered for one term only. Often these seminars grow out of a professor's desire to teach in an area of special challenge which the regular course structure does not make available to him. Many times students define the special problem they wish to investigate and ask the Honors College to help them locate a professor to organize their search. On occasion the college devises a seminar and finds a professor to direct it.

Honors seminars soon to be offered include investigations into such problems as the following: What is the relationship between the ideals of justice and their expression in the American legal system? How does the society in which the artist lives affect the forms he chooses to express himself?

What shape, considering its past and its present forms, will the American university take in the future? How can "systems analysis" help us identify the similarities between the organization of different phenomena? How do the form and content of the mass media affect the individual and society? To what extent can the nature of American society be understood through a reading of popular literature? To what degree can the laws of thermodynamics be apprehended by the non-specialist as an organizing metaphor? What can be learned about the nature of literature and language through studio experience in the fine arts?

Honors seminars are usually elected in subject matter areas outside the student's major field, although this is not mandatory. These special studies may be used to satisfy college or University group requirements: a seminar concentrating on some aspects of art or literature could, for instance, be applied toward a humanities group requirement.

Honors Council

Composed of 12-15 students and four faculty members and meeting at regular intervals, the council advises the director on matters of policy and serves as an agency for innovation of new courses and programs. Suggestions for the improvement of the college or questions concerning existing procedures should generally be introduced through student representatives.

Registration

Each Honors College student works with the academic adviser assigned to him by his major department. To allow for greater flexibility and efficiency, Honors College courses are not listed in the *Schedule of Classes*. Each term, before preregistration, Honors College students will receive a mimeographed class schedule and course descriptions, if they call at Chubb House.

Preferred registration for Honors College students means that their registration materials are processed before those of other students so that they are not "closed out" of sections.

Graduation

It is the responsibility for each student to make sure that the college is informed a

month prior to graduation that he expects to graduate with "Honors in" or "Honors in General Studies." This is necessary so that proper recognition may be given at commencement exercises. Notification of your status should be made on the card accompanying your application for graduation.

INTERNATIONAL STUDIES

J. Norman Parmer, *Assistant Dean of Faculties for International Studies*

Center for International Studies

Ohio University provides students and citizens of the United States and other countries with opportunities to obtain knowledge about peoples and cultures of Africa, Asia and Latin America. This endeavor is founded on the broad belief that an appreciation of different values and institutions increases understanding between peoples, enriches the lives of individuals and assists all in forming opinions on issues which affect the growing world community. Now and in the years ahead, the ideas and actions of African, Asian and Latin American governments and peoples will vitally affect all Americans. The principal means of conducting teaching, research and publication activities on these three world regions is the Center for International Studies which was established in 1964.

Undergraduate Certificate

The center offers a Certificate in African, Asian or Latin American Studies to undergraduate students. The certificate is a supplement to the student's major and is intended for those who may be interested in the Peace Corps, international business, international education, graduate study on Africa, Asia or Latin America or simply obtaining a better understanding of the world. While the certificate will not make one an expert on one of these world regions and will not lead automatically to a career in the broad fields suggested above, it will provide the student with a good foundation for additional study.

African Studies

Twenty faculty members teach about 60 courses each year in the African Language and Area Center. Two years each of the Hausa and Swahili languages are offered every year (see linguistics courses) and may be used to fulfill language requirements in the College of Arts and Sciences and other colleges whose deans approve.

In addition to assisting in the coordination and development of new courses and expansion of library resources, the African Language and Area Center also supports faculty and student research and sponsors an African Publications Series. It provides a forum for lectures by distinguished Africans and specialists on Africa. Similarly, it helps to bring African cultural attractions to the Athens campus. Seminars and colloquia on special subjects are arranged during the year. A film series on Africa is offered.

The African Language and Area Center has been designated a Title VI Center under provisions of the National Defense Education Act since 1965. A brochure describing the center is available on request.

Latin American Studies

Latin American studies have long been an important part of undergraduate work at Ohio University. Currently some 12 faculty members teach about 30 courses each year. There are extensive offerings in Spanish and Portuguese language and literature as well as courses in economics, art history, government, history, sociology and comparative literature. Study-abroad programs in Spain and Mexico are important features of Latin American studies at Ohio University.

Southeast Asia Studies

Thirty faculty members teach about 70 courses each year dealing with Southeast Asia and neighboring Asian regions. The Malay/Indonesian language is taught through the advanced level (three years); the Chinese language (Mandarin) is offered for four years. Either language may be used to meet College of Arts and Sciences language requirements and the language requirements of other colleges whose deans approve. (See linguistics courses.)

The program sponsors a Southeast Asia Publication Series and also supports faculty

research. A series of lectures is provided throughout the year featuring Asian scholars as well as specialists on Asia. The area program assists in the development of new courses and in the expansion of library resources. About 175 Asian students are studying at Ohio University. A brochure describing the Southeast Asian Studies Program is available on request.

PRINCIPAL COURSES

Below is a list of the principal courses relevant to international studies in Africa, Asia or Latin America. Please check the complete course description under the various departments.

ART HISTORY

- 330 The Arts of the Orient
- 331 Pre-Columbian Art
- 332 African Art
- 481 Readings

DANCE

- 250 Ethnic Dance of Non-Western Cultures
- 350-
- 351-352 Dance Cultures of the World

ECONOMICS

- 418 Agricultural Development
- 420 Economic Development
- 421 African Economic Development
- 422 Chinese Economy
- 423 Economy of Latin America
- 425 Comparative Economic Systems
- 480 International Economics

EDUCATION, INTERNATIONAL COMPARATIVE

- 420 Comparative Cultures and Education
- 425A Education and Development in Africa
- 425B Education and Development in Asia
- 432 Perspectives in International Education
- 493 Readings

ENGLISH LANGUAGE AND LITERATURE

- 306A,B,C Studies in Oriental Literature
- 306C Literature of Island Southeast Asia
- 374 Language and Culture
- 441 Studies in Comparative Literature

FINANCE

- 455 International Finance

Curricula and Programs

Geography

- 345 Southeast Asia I
- 346 Southeast Asia II
- 350 Geography of Northern Africa
- 351 Geography of Sub-Saharan Africa I
- 352 Geography of Sub-Saharan Africa II
- 355 Geography of South America
- 356 Geography of Middle America
- 490 Geographic Studies

GOVERNMENT

- 334A,B Government and Politics of Latin America
- 335 Politics of Developing Areas
- 441 Government and Politics of Africa
- 445 Government and Politics of Japan
- 446 Government and Politics of China
- 447A,B Government and Politics of Southeast Asia
- 461 New States in World Politics
- 462 Race and Politics in Southern Africa
- 490 Seminar in Government
- 498 Problems in Government

HISTORY

- 323A Latin American Survey—Colonial Period
- 323B Latin American Survey—National Period
- 325 Inter-American Relations
- 341A Africa in Precolonial Times
- 341B Africa in Recent Times
- 345A Southeast Asia to 1820
- 345B Southeast Asia: Colonialism to Independence
- 346A Traditional China to 1800
- 346B Modern China
- 348A Traditional Japan
- 348B Modern Japan
- 422 Latin America in 19th Century
- 426A Recent Latin America: Argentina, Brazil and Mexico in 20th Century
- 426C Recent Latin America: Central America and the Island Republics in 20th Century
- 427 Studies in Recent Latin American History
- 436A North Africa to 1914
- 436B North Africa since 1914
- 440 Seminar in Slave Trade (Two quarters)
- 441 Readings in African History
- 442A History of South Africa to 1899

- 442B South Africa in Recent Times
- 443 History of East Africa
- 444A History of Malaysia
- 444B Burma and Thailand in Modern Times
- 444C History of Vietnam
- 444D Chinese in Southeast Asia
- 498 Special Problems

JOURNALISM

- 466 International Communications

LINGUISTICS

- 372-3-4A Elementary Hausa
- 375-6-7A Intermediate Hausa
- 372-3-4B Elementary Chinese
- 375-6-7B Intermediate Chinese
- 372-3-4C Elementary Malay/Indonesian
- 375-6-7C Intermediate Malay/Indonesian
- 372-3-4D Elementary Swahili
- 375-6-7D Intermediate Swahili

MODERN LANGUAGES

Portuguese

- 111-2-3 Basic Spoken Portuguese
- 211-2-3 Intermediate Spoken Portuguese and Reading
- 241 Literature and Interpretation

Spanish

- 111-2-3 Elementary Spanish
- 211-2-3 Intermediate Spanish
- 241 Literature and Interpretation
- 349 Spanish-American Civilization and Culture
- 443 Survey of Spanish-American Literature
- 447 Themes from Latin-American Prose
- 448 Contemporary Spanish-American Literature

PHILOSOPHY

- 370 History of Religions: India
- 371 History of Religions: Southeast Asia
- 470 Indian Philosophy
- 471 Buddhist Philosophy

SOCIOLOGY AND ANTHROPOLOGY

- 371 Social Anthropology
- 377 Peasant Communities
- 380 The Africans and Their Culture
- 381 Culture Areas of Sub-Saharan Africa
- 385 Cultures of Mainland Southeast Asia

- 386 Cultures of Island Southeast Asia
399 Readings in Anthropology
405 Readings in Sociology

Study Abroad Programs and International Summer Employment

In recognition of the ever-increasing interest in and need for students to expand their educational experiences beyond the campus, Ohio University has developed several foreign study programs.

Full academic-year programs for undergraduate students are conducted in Austria and France, cooperatively with Bowling Green State University. Ohio University administers summer programs for undergraduates and graduate students in Italy, Mexico, Nigeria and Greece. For information on specific course offerings, see Study Abroad Programs in the section, Courses of Instruction.

The Office of Study Abroad Programs and International Summer Employment likewise coordinates the German Work Program, in which students may spend a summer working in West Germany. Similarly, the office administers a program that enables German students to work in Athens during the summer.

Study Abroad Programs

The Office of Study Abroad Programs at Ohio University currently administers six academic programs in foreign countries: full academic-year programs in Austria and France, and summer programs in Greece, Italy, Mexico and Nigeria. The curriculum in these programs varies somewhat from year to year. The courses listed below are to be offered during summer 1971 or academic year 1971-72. Courses are described if equivalent courses (in number and content) are not available on the Athens campus. Descriptions of the other courses may be found under individual departmental headings in this bulletin. The suffix *x* designates study abroad.

AUSTRIA

- AH 300x Survey of European Art History
(3) Emphasis on Germany and Austria.

- EdIC 420x Comparative Cultures and Education (4) Studies in secondary education: Austrian, German and American.
Geog 340x Geography of Western Europe (3) Emphasis on Germany and Austria.
Ger 341x-342x-343x Advanced Conversation and Composition (4-4-4)
Ger 355x-356x Introduction to German Literature (4-4)
Ger 435x Proseminar: German Short Stories Since 1945 (3)
Ger 439x Grammatical Structure (4)
Govt 332x Comparative Government: Germany and Austria (4)
Hist 371x History of Central Europe (4) Evolution of Austria from its role as a frontier against the East to that of the heart country of the Holy Roman Empire and the Austrian-Hungarian Empire.
ML 445 Teaching of Modern Foreign Languages (4)
Mus 120x Introduction to Music Literature (3) Study of the works of major German and Austrian composers.

FRANCE

- AH 324x French Art of the Middle Ages and Renaissance (3)
AH 326x Baroque and Rococo Art in France (3)
AH 328x French Impressionism and Contemporary Art (3)
Eng 341x Themes in Comparative Literature (3) French and American literature of the 19th century.
Fr 341x-342x-343x Advanced Conversation and Composition (3-3-3)
Fr 335x-356x Introduction to French Literature (3-3)
Fr 437x Applied Phonetics (3)
Fr 441x Stylistics (3)
Geog 340x Geography of Western Europe (3) Emphasis on France.
Govt 303x Urban Politics (3) Comparative French and American urbanization.
Govt 332x Comparative Government (3) Analysis of the government of France.
Govt 498x Problems in Government (3) Independent study: contemporary Touraine.
Hist 361x History of France I: to 1600 (3)
Hist 362x History of France II: 1600-1789 (3)
Hist 363x History of France III: 1789-present (3)

Mus 120x Introduction to Music Literature (3) Study of major French composers and works in historical perspective.
Phil 491x Contemporary French Thought (3) Selected subjects from French philosophers of the 20th century.

GREECE

Hist 329x Ancient History: Hellenic Civilization (3)
Hist 470x History of the Byzantine Empire, 324-1453 (3)

ITALY

Art 205x-206x-207x-305x-306x-307x-406x-406x-407x Painting (3-5 credits each)
Art 480x Individual Problems (1-3)
AH 323x Italian Renaissance Art (4)
CA 320x Fine Arts in Florence (6) Designed to utilize the rich cultural environment of Florence.
Hist 456x The Italian Renaissance (3) Emphasis on the cultural history of the Florentine Renaissance.
Ital 111x Elementary Italian (4)
Ital 211x Intermediate Italian (4)

MEXICO

EdIC 420x Comparative Cultures and Education (3) Individual studies in comparative education.
Eng 206x Modern Tradition in Comparative Literature (3)
Psy 490x Psychology of the Mexican (3)
Span 111x-112x-113x Elementary Spanish (4-4-4)
Span 211x-212x-213x Intermediate Spanish (4-4-4)
Span 341x Advanced Conversation and Composition (4)
Span 435x Proseminar: Orientation (1)
Span 437x Applied Phonetics (3)
Span 441x Stylistics (3)

NIGERIA

Art 332x African Art (4) Survey of West African ethnic art.
EdIC 425x Education and Development in Africa (4)
Govt 490x Studies in Government (5) Studies in Nigerian politics.
Hist 341x History of West Africa from Ancient Times to Present (4)

OFF-CAMPUS ACADEMIC PROGRAMS

Ralph D. Smith, *Dean*

Edward F. Sarno, *Associate Dean*

Edward W. Erner, *Assistant Dean*

Branch Campuses

Ohio University has five campuses other than the Athens campus. They are located in Belmont County (St. Clairsville), Chillicothe, Lancaster, Portsmouth and Zanesville and each has a permanent building. An academic center at Ironton and an educational center at Lockbourne Air Force Base also come under the jurisdiction of the Office of Off-Campus Academic Programs.

The objective of the branch campuses is to serve students at the freshman and sophomore levels. A full two-year curriculum in the arts and sciences, business administration and education is offered, as well as programs in fine arts and engineering. Some branch campus students may choose to earn the associate in arts degree by following the approved two-year program; but the majority of students will move on to the Athens campus for their junior and senior years.

The admission policies for the branch campuses are the same as those of the Athens campus. Ohio high school graduating seniors who can commute from home to one of the branch campuses will be admitted as regular full-time or special part-time students. This decision is made on the basis of the high school transcript, scholastic aptitude test, plus the Ohio high school recommendations. Applicants who cannot commute will be accepted at any of the branch campuses provided they can meet residence status requirements. The branch campuses do not have residence halls, but each has approved outside housing.

Extension Division

Extension classes, adult and continuing education classes and correspondence courses are planned as requests and need indicate. Both credit and noncredit courses are offered. They may or may not lead to a degree, but students seeking admission to a degree program must be admitted through regular University admissions procedures. Courses may be designed to meet the special needs of business, industrial and professional groups as well as individuals. Direct inquiries to the Director, Extension Division.

Independent Study Through Correspondence

A student enrolling in a correspondence course for degree credit must be in good standing in his college and have the approval of his dean. Upon submitting the written approval and fee for the course, the student receives a study guide with assignments for the courses. Supervised examinations include a mid-course and a final. An initial period of 12 months is permitted upon registration for a correspondence course.

OHIO PROGRAM OF INTENSIVE ENGLISH (OPIE)

Robert F. Dakin, *Director*

This program provides training in the English language designed to raise the proficiency of the non-native speaker to a level that enables him to undertake academic study in an American college or university. Ten- and 20-week full-time intensive courses and a ten-week semi-intensive course accommodate students at varying levels of beginning proficiency. After placement through initial proficiency tests, the student receives from two to five hours of daily classroom and language laboratory instruction and practice in oral and written English.

Regular admission to Ohio University makes students eligible for enrollment in this program if necessary. Students planning study at another college or university in the United States may be admitted as special students for study in the OPIE only. However, this admission is limited to students who can furnish proof of at least provisional admission to another institution.

For further information on fees and enrollment, write to Dr. Robert Dakin, Director, Ohio Program of Intensive English, Gordy Hall, Athens, Ohio 45701.

Courses of Instruction



Courses of Instruction

CATALOG NUMBERS — The catalog number indicates the student classification for which the course is primarily intended:

- 001-099 Noncredit courses
- 100-299 Undergraduate general program
- 300-499 Undergraduate advanced or specialized program

In general, an odd number indicates the first or third quarter of a three-quarter course; an even number, the second quarter. An exception occurs in the numbers used for the teaching techniques courses.

CREDIT—Credit for a course is indicated by the number or numbers in parentheses following the course title. In a quarter course it may be expressed thus: (3), (1-3) or (2 or 3).

A course with one quarter hour of credit (1) is the equivalent of one recitation or two or more laboratory periods a week throughout a quarter.

In a course carrying variable credit the credit may be expressed (1-4, max 8), indicating that one hour is the minimum and four hours the maximum amount of credit allowed for the course in one quarter. However, a student may enroll in the course any number of times and for any number of credit hours, within the quarter limit, provided the total

registration for the course does not exceed eight hours.

Course prerequisites are indicated at the beginning of the course description, following the abbreviation "Prereq." If a student has any doubts if he has fulfilled prerequisites, due to changes in the numbering system over the past several years, he should check the course titles and consult with his adviser and the office of the dean. A student who completes an advanced course may not subsequently enroll in a prerequisite course for credit.

If a course is offered for other than the normal academic year of fall, winter and spring quarters, this fact is noted in parentheses after the prerequisite. Such courses are offered only in the quarters specified.

INSTRUCTORS — The listing is as of May, 1971. Unless otherwise indicated in italics following the quarter specification in the course description, the course is taught by the staff of the department.

FEE—When a course requires a private instructional fee, the amount is stated in the course description.

CLASS SCHEDULE — A Schedule of Classes is available each quarter from the Office of the Registrar.

ACCOUNTING

101 Managerial Accounting (5)

Prereq: Econ 102 or 302 or with Econ 102 or 302. Uses of accounting information for making managerial decisions.

102 Managerial Accounting (4)

Prereq: 101. Continuation of 101. See 101 for description.

303 Accounting Principles and Procedures (4)

Prereq: 102. Fundamental accounting principles and practices emphasizing data accumulation using accounting techniques. Primarily intended for those specializing in accounting.

304 Intermediate Accounting (4)

Prereq: 303. Preparation and analysis of accounting statements; special problems in accounting for current, fixed and intangible assets, for liabilities and for corporate net worth; funds and reserves, and investments.

305 Intermediate Accounting (4)

Prereq: 304. Continuation of 304. See 304 for description.

310 Cost Accounting (4)

Prereq: 102. Manufacturing cost determination under job-order and process systems. Establishment of standard costs, budgets and analysis of variances.

311 Industrial Accounting (4)

Accounting principles with emphasis on accounting for material, labor and overhead in job-lot and process cost systems. Not open to students working toward BBA degree. No credit for those who have completed 75-76 or 101-102.

317 Federal Income Taxes (4)

Prereq: 102 or 311. Federal income taxes for individuals, partnerships and corporations.

324 Advanced Cost Accounting (4)

Prereq: 310. Analysis of relevant costs for decision-making including nonmanufacturing costs. Current cost accounting topics.

343 Federal Income Tax Planning (4)

Prereq: 317. Advanced tax problems of individuals, partnerships and corporations, including tax planning and administration.

401 Auditing Principles and Practice (4)

Prereq: 24 hrs of accounting. Purposes and scope of audits and examinations; audit principles and procedures; audit reports and certificates.

405 Advanced Accounting (4)

Prereq: 305. Problems peculiar to partnerships, receiverships, fiduciaries, installment sales, consignments, insurance, estates and trusts; compound interest applications; governmental accounting; branches, consolidations, and mergers and foreign exchange.

406 Advanced Accounting (3)

Prereq: 405. Continuation of 405. See 405 for description.

491 Seminar (3, 4 or 5)

Prereq: perm. Selected topics of current interest in accounting area.

493 Readings (1-15)

Prereq: perm. Readings in selected fields of accounting. Topics selected by student in consultation with faculty member.

495 Research (3, 4 or 5)

Prereq: perm. Methodology, analysis of data and preparation of research findings.

497 Independent Research (1-15)

Prereq: perm. Research in selected fields of accounting under direction of faculty member.

498 Internship (1-15)

Prereq: perm.

AEROSPACE STUDIES

The Department of Aerospace Studies offers two programs leading to a commission as a second lieutenant in the United States Air Force. The four-year program is designed for students who can begin Air Force ROTC with the fall quarter and complete aerospace studies requirements by their date of graduation. Students taking the four-year program begin by scheduling ASt 101 or 201 (as available) of the General Military Course.

The two-year program is designed for students unable to take Air Force ROTC during their first two years of college. It is similar to the last two years of the four-year program. Students interested in this program will not schedule Air Force ROTC during their first two years; however, they should consult with the professor of aerospace studies during their freshman year (or, in any event, not later than fall quarter of the sophomore year) for instructions regarding ASt 250, a prerequisite.

Both programs, especially the two-year program, are highly competitive for selection into the Professional Officer Course (ASt 300 and 400 series). Entry is based upon a "best qualified" selection process. Completion of the General Military Course (ASt 100 and 200 series) or ASt 250 does not guarantee entry into the Professional Officer Course (POC), but makes one eligible to compete for acceptance into the POC. After achieving commissioned status, the officer serves a minimum of four years active duty with the United States Air Force. For further information contact the professor of aerospace studies.

101 Beginning Aerospace Studies (1)

(fall) *O'Brien, staff.* Doctrine, mission and organization of the United States Air Force and U.S. strategic offensive forces. Offered in alternate years; available in 1971-72 academic year. 1 hr of academics and 1 hr of leadership lab each wk.

102 Aerospace Studies (1)

(winter) *O'Brien, staff.* U.S. defensive forces, their mission, function and employment of nuclear weapons, civil defense, aerospace and missile defense. Offered in alternate years; available in 1971-72 academic year. 1 hr of academics and 1 hr of leadership lab each wk.

103 Aerospace Studies (1)

(spring) *O'Brien, staff.* U.S. general purpose and aerospace support forces, mission, resources and operation of the tactical air forces, with special attention to limited war and review of Army, Navy and Marine general purpose forces. Offered in alternate years; available in 1971-72 academic year. 1 hr of academics and 1 hr of leadership lab each wk.

201 Aerospace Studies (1)

(fall) *O'Brien, staff.* Defense policies, theories of general war and nature and context of limited war, as well as policies and strategies of the Soviet Union and China. Offered in alternate years; available in 1972-73 academic year. 1 hr of academics and 1 hr of leadership lab each wk.

202 Aerospace Studies (1)

(winter) *O'Brien, staff.* Role of alliances in U.S. defense policy, defense organization and decision-making and organization and function of the Dept of Defense. Offered in alternate years; available in 1972-73 academic year. 1 hr of academics and 1 hr of leadership lab each wk.

203 Aerospace Studies (1)

(spring) *O'Brien, staff.* Role of the military in the United States national policies and the elements and process of defense decision-making. Offered in alternate years; available in 1972-73 academic year. 1 hr of academics and 1 hr of leadership lab each wk.

250 Aerospace Studies (0)

Prereq: applicant for 2-yr program which includes perm of prof of aerospace studies. (Must have 2 acad yrs remaining on campus.) (summer only) *Air Force base staff personnel.* 6-wk field training course at an Air Force base. Only for students who did not take the 100 and 200 series. Student should see prof of aerospace studies during fall quarter — no later than January — prior to summer of attendance. Offered summer only, and normally taken during summer prior to student's jr yr in college; must be completed as a prerequisite for 301. Covers essentially same material as the general military education courses given on campus. Pay \$133.98 for 6 wks, with room, board, books, uniforms and travel expenses furnished.

301 Aerospace Studies (3)

Prereq: GMC or 250, and perm. (fall) *Allen, staff.* History and development of airpower in the United States. Communicative skills and qualities of leadership. 3 cl, 1 leadership lab hr.

302 Aerospace Studies (3)

Prereq: 301 and perm. (winter) *Allen, staff.* Covers in-depth mission and organization of Dept of Defense, Air Force concepts, doctrine and employment. Continues communicative skills via student presentations and written reports. Emphasizes qualities and techniques of leadership. 3 cl, 1 leadership lab hr.

303 Aerospace Studies (3)

Prereq: 302 and perm. (spring) *Allen, staff.* Present and future astronautics and space operations; future development of aerospace power. Continues communicative skills and techniques of leadership. 3 cl, 1 leadership lab hr.

350 Aerospace Studies (0)

Prereq: must be in the 4-yr program; 301-302-303, and perm. (summer, by arrangement) *Air Force base staff personnel.* 4-wk field training program conducted on an Air Force base. Normally taken between jr and sr yrs. Consists primarily of orientation to air base facilities, life under military conditions and classroom work to make practical application of courses covered in the fr, soph and jr

Architecture

yrs. Pay \$149.80 per month, with room, board, books, uniform and travel expenses furnished. Students who have taken AST 250 do not take this course.

401 Aerospace Studies (3)

Prereq: 303 and perm. (fall) *Sizemore, staff.* Military professionalism, military justice system; leadership theory, demonstration and practice. Development of communicative skills. 3 cl, 1 leadership lab hr.

402 Aerospace Studies (3)

Prereq: 401 and perm. (winter) *Sizemore, staff.* Principles and functions of management. Continue leadership demonstration and practice. Continue development of communicative skills. 3 cl, 1 leadership lab hr.

403 Aerospace Studies (3)

Prereq: 402 and perm. (spring) *Sizemore, staff.* Human relations, personnel policies; junior officer administrative and staff responsibility; briefing for commissioned service. Continue leadership demonstration and practice. Continue development of communicative skills. 3 cl, 1 leadership lab hr.

ARCHITECTURE

301 Architectural Design I (6)

Prereq: EnvD 403, 462. Problems designed to develop analytical approach to formulating criteria for solving environmental problems and establish design concepts based on these objectives and criteria. Emphasis on human activity patterns as a generator of physical form.

302 Architectural Design I (6)

Prereq: 301. Continuation of 301. See 301 for description.

303 Architectural Design I (6)

Prereq: 302. Continuation of 301-302. See 301 for description.

311 Interior Design I (5)

Prereq: EnvD 403, 462. Problems in design of residential and commercial interiors with emphasis on architectural principles.

312 Interior Design I (5)

Prereq: 311. Continuation of 311. See 311 for description.

313 Interior Design I (5)

Prereq: 312. Continuation of 311 and 312. See 311 for description.

343 Interior Design Studio Seminar (5)

Prereq: EnvD 403, special perm of director. Interior spaces including materials, lighting, color and special construction problems.

344 Interior Design Studio Seminar (5)

Prereq: 343. Continuation of 343. See 343 for description.

345 Interior Design Studio Seminar (5)

Prereq: 344. Continuation of 343-344. See 343 for description.

361 Structural Analysis (4)

Prereq: EnvD 462, arch mathematics requirement. Investigation of mathematical and graphic models used to predict effects of stress on various materials and configurations.

362 Structural Analysis (4)

Prereq: 361. Continuation of 361. See 361 for description.

363 Mechanical Equipment (3)

Prereq: EnvD 462, arch mathematics requirement. Study and design of heating, ventilating, air-conditioning, equipment and systems and of acoustical, electrical, lighting, plumbing and water supply systems.

364 Mechanical Equipment (3)

Prereq: 363. Continuation of 363. See 363 for description.

367 Design Materials (3)

Prereq: 311 or concurrently. Problems dealing with principles, theories and processes involved in design and fabrication.

401 Architectural Design II (6)

Prereq: 303, 362, 364; or perm. Continuation of 303 with emphasis on social objectives as generators of human activity patterns and their form implications for larger environmental systems.

402 Architectural Design II (6)

Prereq: 401. Continuation of 401. See 401 for description.

403 Architectural Design II (6)

Prereq: 402. Continuation of 401 and 402. See 401 for description.

407 Advanced Architectural Design (6)

Prereq: 403, 5th-yr status and perm. Design studio in which architectural design problems are assigned to provide advanced study of individual and group building organization, site planning, building technologies and architectural graphics.

408 Advanced Architectural Design (6)

Prereq: 407. Continuation of 407. See 407 for description.

409 Advanced Architectural Design (6)

Prereq: 408. Continuation of 407-408. See 407 for description.

411 Interior Design II (6)

Prereq: 313. Design projects encompassing organization of complex interior planning problems.

412 Interior Design II (6)

Prereq: 411. Continuation of 411. See 411 for description.

413 Interior Design II (6)

Prereq: 412. Continuation of 411 and 412. See 411 for description.

447 Seminar in Visual Perception (3)

Prereq: perm, 5th-yr status. Perceptual theory involving experimental multi-media studies in environmental design.

451 Philosophy of Architecture (3)

Prereq: EnvD 253. Development of architectural theory with special emphasis upon theory and philosophy of 20th century.

452 Philosophy of Architecture (3)

Prereq: 451. Continuation of 451. See 451 for description.

457 Seminar in Architectural Theory (3)

Prereq: 452 or perm. Issues and ideas in architectural history, such as cultural phenomenon of Classicism, Romanticism, Expressionism and Functionalism and their implications for architecture of the past and future.

458 Seminar in Architectural Theory (3)

Prereq: 457 or perm. Continuation of 457. See 457 for description.

461 Structural Analysis—Wood (4)

Prereq: 362. Theory and design of structural systems, with emphasis on wood.

462 Structural Design—Steel (4)

Prereq: 461. Theory and design of structural systems, with emphasis on steel.

463 Structural Design—Concrete (4)

Prereq: 462. Theory and design of structural systems, with emphasis on concrete.

467 Seminar in Advanced Structures (3)

Prereq: 463 or perm. In-depth investigation of indeterminate structures and contemporary complex structural systems such as shells, membranes, space frames, etc. Emphasis on total understanding of behavior of structures.

468 Seminar in Advanced Structures (3)

Prereq: 467. Continuation of 467. See 467 for description.

482 Seminar in Professional Practice (3)

Prereq: 5th-yr status or perm. (spring) Techniques and responsibilities of professional practice.

484 Seminar in Professional Practices in Interior Design (3)

Prereq: 311 or concurrently. Techniques and responsibilities of professional practice in interior design.

495 Directed Research I (1-6, max 24)

Prereq: written perm. Supervised group and individual projects.

ART

101 Studio Foundations (5)

Required of all entering fr in art.

102 Studio Foundations (5)

See 101 for description.

103 Studio Foundations (5)

See 101 for description.

205 Painting (3 or 5)

Prereq: 101-103.

206 Painting (3 or 5)

Prereq: 205.

207 Painting (3 or 5)

Prereq: 206.

215 Ceramics (3 or 5)

Prereq: 101-103.

216 Ceramics (3 or 5)

Prereq: 215.

217 Ceramics (3 or 5)

Prereq: 216.

228 Drawing (3)

Prereq: 101-103.

231 Sculpture—Wood (3 or 5)

Prereq: 101-103.

232 Sculpture—Synthetic (3 or 5)

Prereq: 101-103.

233 Sculpture—Metals (3 or 5)

Prereq: 101-103.

236 Metal Design (3 or 5)

Prereq: 101-103.

Art

- 241 Lithography (3 or 5)
Prereq: 101-103.
- 242 Intaglio (3 or 5)
Prereq: 101-103.
- 247 Relief Prints (3 or 5)
Prereq: 101-103.
- 248 Silk Screen (3 or 5)
Prereq: 101-103.
- 275 Weaving (3)
Prereq: 101-103.
- 276 Weaving (3)
Prereq: 275.
- 303 Watercolor (3)
Prereq: jr rank.
- 304 Watercolor (3)
Prereq: 303.
- 305 Painting (3 or 5)
Prereq: 207.
- 306 Painting (3 or 5)
Prereq: 305.
- 307 Painting (3 or 5)
Prereq: 306.
- 308 Figure Painting (3)
Prereq: 207.
- 309 Figure Painting (3)
Prereq: 308.
- 315 Ceramics (3 or 5)
Prereq: 217.
- 316 Ceramics (3 or 5)
Prereq: 315.
- 317 Ceramics (3 or 5)
Prereq: 316.
- 321 Drawing Workshop (3)
Prereq: jr rank.
- 322 Drawing Workshop (3)
Prereq: 321.
- 328 Drawing (3)
Prereq: 228.
- 329 Drawing (3)
Prereq: 328.
- 331 Sculpture (3 or 5)
Prereq: 9 hrs sculpture.
- 332 Sculpture (3 or 5)
Prereq: 331.
- 333 Sculpture (3 or 5)
Prereq: 332.
- 336 Metal Design (3 or 5)
Prereq: 236.
- 341 Prints (3 or 5)
Prereq: 9 hrs prints.
- 342 Prints (3 or 5)
Prereq: 341.
- 343 Prints (3 or 5)
Prereq: 342.
- 360 Art for Elementary Teachers (6)
Prereq: jr rank.
- 375 Weaving (3)
Prereq: 276.
- 376 Weaving (3)
Prereq: 375.
- 405 Painting (3 or 5)
Prereq: 307.
- 406 Painting (3 or 5)
Prereq: 405.
- 407 Painting (3 or 5)
Prereq: 406.
- 415 Ceramics (3 or 5)
Prereq: 317.
- 416 Ceramics (3 or 5)
Prereq: 415.
- 417 Ceramics (3 or 5)
Prereq: 416.
- 418 Glass (3)
Prereq: sr rank or perm.
- 419 Glass (3)
Prereq: 418.
- 428 Drawing (3)
Prereq: 329.
- 429 Drawing (3)
Prereq: 428.
- 431 Sculpture (3 or 5)
Prereq: 333.
- 432 Sculpture (3 or 5)
Prereq: 431.
- 433 Sculpture (3 or 5)
Prereq: 432.
- 436 Metal Design (3 or 5)
Prereq: 336.

441 Prints (3 or 5)

Prereq: 343.

442 Prints (3 or 5)

Prereq: 441.

443 Prints (3 or 5)

Prereq: 442.

461 Art Experiences in the Elementary School (3)

Prereq: jr rank.

462 Art Teaching in the Secondary School (3)

Prereq: jr rank.

475 Weaving (3)

Prereq: 376, perm.

476 Weaving (3)

Prereq: 475.

480 Individual Problems (1-5)

Prereq: perm.

481 Individual Readings (1-5)

Prereq: perm.

ART HISTORY

311 History of Painting and Sculpture (3)

312 History of Painting and Sculpture (3)

Prereq: 311.

313 History of Painting and Sculpture (3)

Prereq: 312.

320 Greek Art (4)

Prereq: 311-313 or perm. Specific developments in period between Minoan/Helladic cultures and those of Alexandrian Empire.

321 Roman Art (4)

Prereq: 311-313 or perm. Motifs and concepts ranging from Etruscan artifacts through Hellenistic to advent of Constantine.

322 Medieval Art (4)

Prereq: 311-313 or perm. Painting and sculpture from time of Constantine to that of Giotto.

323 Italian Renaissance Art (4)

Prereq: 311-313 or perm. Monuments, motifs and their implications in Quattrocento Italy.

324 Northern Renaissance Art (4)

Prereq: 311-313 or perm. Monuments, motifs and their applications in Renaissance France, England and the Low Countries and in Reformation Germany.

325 Art of High Renaissance and Mannerism (4)

Prereq: 311-313 or perm. Studies in art and theory of Cinquecento.

326 Baroque and Rococo Art (4)

Prereq: 311-313 or perm. Paintings and sculpture of 17th and 18th centuries.

327 Art of the 19th Century (4)

Prereq: 311-313 or perm. Arts and their development during and after Industrial Revolution.

328 Modern Art (4)

Prereq: 311-313 or perm. Specific movements and artists since 1900.

329 The Arts of the United States (4)

Prereq: 311-313 or perm. Specific problems and their patterns from Colonial Era.

330 The Arts of the Orient (4)

Prereq: 311-313 or perm. Selected studies of arts of India, China and Japan.

331 Pre-Columbian Art (4)

Prereq: 311-313 or perm. Arts of early Mexico, Middle and South America.

332 African Art (4)

Prereq: 311-313 or perm. Survey of traditional West African tribal art.

333 Ancient Near Eastern Art (4)

Prereq: 311-313 or perm. Motifs and monuments of Egypt, Mesopotamia, Assyria, and Babylonia.

334 Aspects of Film (3)

(fall, winter) Examination of basic motion picture structure; survey of various genre (dramatic, documentary, experimental), exercise in film analysis and criticism. Weekly screenings.

335 Film Techniques (3)

Prereq: 334 or perm. (spring) Survey of basic production techniques; advanced analysis of film forms. Includes participation in film-making workshop.

336A Narrative Film (3)

Prereq: 334 or perm. (fall) History of the story motion picture with emphasis on contemporary film makers.

336B Studies in the Documentary Film (3)

Prereq: 334 or perm. (winter) Development of naturalist and polemic traditions; intensive study of modern cinema verite.

336C Studies in the Experimental Film (3)

Prereq: 334 or perm. (spring) Evolution of non-narrative and imagist impulse in films and concepts of integral cinema.

340 Art and Ideas in Painting (4)

Prereq: sr rank, 311-313 and 1 art history course, or perm. Examination of the approach of painters of Western art to their work. Non-historical in nature, using subject matter as framework and foundation with ideas and concepts concerning the creative act and artist-work of art relationship.

337 History of Photography (4)

History of development of photography as an art, a science and an industry. Study of leading photographers and their contributions to development of the art.

338 History of Photography (4)

Prereq: 337. Continuation of 337. See 337 for description.

339 History of Photography (4)

Prereq: 338. Continuation of 337-338. See 337 for description.

480 Individual Problems (1-6)

Prereq: perm.

481 Individual Readings (1-6)

Prereq: perm.

ASTRONOMY

300 Elementary Astronomy (3)

Prereq: mathematics through trigonometry, and elementary physics. Apparent motions of sun, moon, planets and stars. Relations between apparent positions of celestial objects and time, latitude and longitude of observer. Applications to time determination, surveying and navigation. Physical properties of earth, moon and planets.

301 The Solar System (3)

Prereq: 300. Physical properties of sun, moon, planets, comets, meteors and meteorites. Atmospheres, temperatures and surface conditions of other planets. Origin and evolution of the planets.

302 Stars and Galaxies (3)

Prereq: 301. Methods of studying sizes, temperatures, densities and compositions of stars and nebulae. Physical properties of our galaxy. Physical properties of other galaxies and their arrangement in space. Theories of origin and evolution of stars and galaxies.

310 Astronomy Laboratory (1)

Prereq: 300 or with 300. Observational work at telescope. Computations of coordinates of celestial objects. Practice with marine sextant and aviation spectrograms. Solution of navigation problems.

311 Astronomy Laboratory (1)

Prereq: 300 and 310. Observational work at telescope, with emphasis on moon and planets. Measurement of astronomical photographs and spectrograms. Reduction of astronomical data.

312 Astronomy Laboratory (1)

Prereq: 301 and 311. Observational work at telescope, with emphasis on stars, nebulae and galaxies. Measurement of stellar spectrograms for determination of radial velocity. Spectroscopic measurement of velocities of recession of galaxies and quasars.

320 Elements of Navigation (2)

Prereq: mathematics through trigonometry. (on demand) Basic navigational astronomy; use of sextant and nautical almanac; line of position method as used in air and surface navigation.

350 Celestial Mechanics (4)

Prereq: differential equations. Differential equations of planetary motion; vector treatment of 2-body problem; determination of orbits of planets and satellites.

450 Studies in Astronomy (1-6, arranged)

AVIATION

110 Primary Ground Instruction (4)

40 hrs ground instruction covering radio navigation, meteorology, FAA regulations, communications, aircraft construction and performance data to meet requirements of private pilot's written exam. 4 lec.

240 Primary Flight Instruction (4)

Prereq: FAA written passed. 40 hrs flight training and related lectures including primary flight maneuvers and cross-country flying. Meets requirements for private pilot's certificate. 1 lec, 5 lab. Course fee: \$570.

310 Commercial Ground Instruction (4)

Prereq: private pilot's certificate. 40 hrs ground instruction covering advanced radio navigation, meteorology, FAA regulations, aircraft construction, performance data and instruments to meet requirements of commercial written exam. 4 lec.

315 Flight Instructor Ground Instruction (4)

Prereq: commercial pilot's certificate or perm. 40 hrs review of all previous instruction with emphasis on how to instruct and a breakdown of maneuvers. Covers requirements for flight instructor written exam. 4 lec.

340 Intermediate Course No. 1 (4)

Prereq: private pilot's certificate. 40 hrs flight training consisting mainly of solo cross-country. 5 lab. Course fee: \$570.

343 Intermediate Course No. 2 (4)

Prereq: private pilot's certificate and 340, or perm. 40 hrs flight training consisting mainly of solo cross-country to build flying hrs toward a higher rating. 5 lab. Course fee: \$570.

345 Intermediate Course No. 3 (3)

Prereq: private pilot's certificate, 340, and 343, or perm. 35 hrs flight training consisting of introduction to advanced maneuvers and cross-country to qualify for commercial course. 5 lab. Course fee: \$500.

415 Instrument Ground Instruction (3)

Prereq: commercial pilot's certificate or perm. 30 hrs ground instruction on flying solely by reference to instruments to meet requirements of instrument written exam. Included are maneuvers, navigation, meteorology, radio procedures and instrument interpretation. 3 lec.

418 Instrument Instructor Ground Instruction (3)

Prereq: instrument rating. 30 hrs review of instrument course with emphasis on how to instruct instrument flying. Covers requirements for instrument written exam. 3 lec.

420 Commercial Flight Course (4)

Prereq: private pilot's certificate and 120 flying hrs from approved school or 140 hrs from unapproved school, and FAA written passed. 40 hrs dual flight instruction and solo practice designed to increase proficiency toward commercial pilot certificate. Includes cross-country, advanced maneuvers, night and instrument instruction. 5 lab. Course fee: \$600.

421 Airline Transport Ground Instruction (4)

Prereq: instrument rating and multi-engine rating. 40 hrs advanced course placing major emphasis on specific requirements and duties of airline transport pilots in accordance with Federal Aviation Regulations. Provides aeronautical requirements for airline transport pilot written exam. 4 lec.

443 Flight Instruction in Multi-Engine Aircraft (2)

Prereq: pilot's certificate or perm. 12 hrs of procedures with both engines operative, with one engine inoperative (feathered), single engine speeds, effects of airplane configuration on engine-out performance. Enroute operations, single engine approaches and landings. 1 lec. Course fee: \$480.

445 Flight Instructor Course (3)

Prereq: commercial pilot's certificate or perm. 25 hrs review of commercial course with emphasis on how to instruct and analysis of maneuvers. 5 lab. Course fee: \$350.

446 Introduction to Instrument Flight Procedures (1)

10 hrs of instruction given in link trainer to cover basic flight by reference to instruments, radio navigation, instrument approaches and radio procedures. 1 lec. Course fee: \$75.

448 Instrument Flight Course (4)

Prereq: commercial pilot's certificate or perm. 30 hrs of instruction of flight by sole reference to instrument approaches. 5 lab. Course fee: \$575.

450 Instrument Flight Instructor Course (2)

Prereq: instrument rating. 25 hrs of review of instrument course with emphasis on how to instruct on instruments. 5 lab. Course fee: \$500.

460 Airline Transport Pilot Flight Course (2)

Prereq: commercial pilot's certificate, instrument and multi-engine rating and perm. 15 hrs taking a practical and operational approach to problems that arise in planning and conducting air transport operations. 5 lab. Course fee: \$690.

BACTERIOLOGY

See Zoology

BLACK STUDIES

Education

Fine Arts

History and Political Science

Language Arts and
Communications

Literature

Sociology and Psychology

Education

140 Survey of Physical Sciences (3)

Seminar which provides basic understanding of physical sciences and their practical application for teaching in inner-city schools.

240 Introduction to Education (5)

Ultimate aim of education is to enable each child to develop a positive image of himself as a *person* and a *learner*. This seminar explores areas of identity, self-worth and positive regard as elements of the learning environment. Head Start, early childhood grades and primary grades stressed.

241 Affective Educational Strategies (5)

Explores affective strategies and how they can be designed and implemented to support learner. Primary and elementary grades stressed.

242 Black Education Seminar (5)

Educational processes in relation to contemporary society, cultural forces and institutions helping to shape education; some resulting issues and problems. School as an institution of education, its guiding theories and basic practices, as well as role of teacher will provide a staging point for this seminar.

340 Art and Poetry of Black Children (3)

Primarily for those who plan to become teachers or other school-connected personnel. Actual children's art and poetry from classroom experiences used. Major emphasis on use of children's writing as a means of instilling self-worth as a learner.

Fine Arts

220 Afro-American Art and Thought (5)

African and Afro-American art and literary styles from Harlem Renaissance (1920's) to present.

320 Black Music Seminar I: The Blues Era (3)

Contributions of past and present non-white writers, performers and historians in area of popular music forms. Their relationship to development of popular music for the black population and impact that it has upon ethnic development stressed.

321 Black Music Seminar II: Early Jazz to Be-bop (3)

See 320 for course description.

322 Black Music Seminar III: Cool Jazz to Soul Era (3)

See 320 for course description.

History and Political Science

150 Introduction to Black Social Development (5)

General discussion and critical analysis of historical and social development in West Africa from 14th century up to beginning of colonial slave trade.

151 Introduction to Afro-American History (5)

Examination of impact of people of Afro-American descent on general development of American society. Particular consideration given to interconnection between struggles of black people and decisive political, economic, social and cultural trends in America.

152 History of the Black Worker (5)

Analysis of historical role of black labor force in the American economy, with emphasis on pattern of relationships between black workers and general organization of American labor movement.

153 History of Colonialism (5)

Analysis of historical development of colonization throughout the world.

250 Basic Political Economy (5)

Exploration of theories of political policies and economic processes, their interrelations and their influence on socio-economic character of the black community.

251 Afro-American Socio-Economic Development I (5)

Prereq: 250. Political-economic study of historical development of black people in American society from colonial period to 1860.

252 Afro-American Socio-Economic Development II (5)

Prereq: 251. Continuation of 251: 1860 to 20th century. Extensive coverage of Reconstruction era through development of American imperialism and consequence of these processes on Afro-American community.

253 History of Neo-Colonialism (5)

Prereq: 153. Current conditions and trends of development of colonized peoples and their relationship to society at large.

254 History of Injustice in the United States (5)

Slavery in United States, reconstruction, Emancipation Proclamation, Freedman's Bureau, black codes and modern forms of oppression.

350 The Black Community in the 20th Century (5)

Prereq: 252 or perm. Survey of black community's development during 20th century and its relation to development of larger American society over the same period. Attention given to interconnection between social conditions and certain aspects of black liberation movements.

351 Analysis of American Pluralism (5)

Analysis of basic philosophy and practice of American pluralism. Particular emphasis placed on impact of pluralist practices on development of local political communities.

352 Black Political Thought (5)

Survey of socio-political aspects of black community's voting power, voting rights and opportunities for political office, as well as strategies for change.

353 Comparative Colonialism (5)

Prereq: 250 or perm. Seminar in selected social systems.

450 Politics of Liberation (5)

Prereq: 250 and perm. Research or directed reading based on student's special interest.

451 Critique of Afro-American Thought (5)

Prereq: 252. Critical evaluation of relation between policies of historically foremost black figures and various trends of black liberation movement. Emphasis on influence and implications of socio-political thought and course of recent development of black community and American society.

Language Arts and Communications

101 Practice Writing (3)

Fundamental writing techniques for articles and research papers. Grammar, syntax and organization of information will be covered.

102 Practice Study Skills (3)

Comprehension and fundamental study techniques.

201 Creative Writing (3)

Creative writing practicum.

301 Project and Proposal Writing (3)

Seminar for students who will ultimately be employed in community roles where proposal writing and project design skills are necessary. It is suggested that 101 or 201 be taken before 301.

302 Culture and Politics of African Language (5)

Political and socio-cultural forces which effect developmental changes of African languages. Geographic areas bordering on and including Nigeria emphasized.

401 Blacks in Broadcasting (3)

Contributions of past and present non-white broadcasters and their relationship to development of radio and television media. Socio-cultural achievement, opportunities and strategies for change form backdrop for this course.

Literature

130 Literature of the Third World (5)

Survey of literature of Africa, South America, Cuba, Mexico, the Caribbean and Black America. Cultural, social and political perspectives, and the ramifications before and after nominal independence of third world investigated.

231 Literature of Latin America (5)

Survey of literature of Latin America from cultural, social and political perspectives.

232 Literature of West Africa (5)

Survey of literature of West Africa from cultural, social and political perspectives.

330 Advanced Seminar in Third World Literature (5)

Prereq: 130 or 231. See 130 for course description.

333 Literature of South Africa (5)

A seminar for jrs, srs and graduate students to view literature as documents of history based on premise that certain historical, political and economic conditions produce social situations which are dramatized in plays, novels, short stories, poems, etc., written by those who have experienced the peculiarities of these conditions.

Sociology and Psychology

260 History and Psychology of Colonialism (5)

Introductory approach to historical development of colonialism and psychological effects resulting from that phenomenon.

261 Social Psychology of Colonized People (5)

Prereq: 260 or perm. Contemporary view of world-wide colonization and its social, psychological and cultural effects upon people who must develop a life style appropriate for existence in a colonized environment.

264 Comparative Study of Injustice (5)

Examination of experience of black people in United States, South Africa and Congo, with emphasis on psychological and social effects. Indigenous literary works which reflect conditions of these effects used.

360 The Black Family (5)

Black family in America and its important role in development of ethnic differences, strengths and strategies.

490 Independent Study (1-15)

Primarily for srs with special perm from dean.

BIOLOGY

See Botany or Zoology

BOTANY

The major requirement for the AB degree is a minimum of 45 hours in departmental courses, and for the BS degree, 55 hours, including ten hours at the junior-senior level. Both AB and BS degree candidates must complete the following requirements: Bot 101,

102, 307, 308, 309, 405, 424, 425 or 426, 431 and 475 and Zool 203.

Non-departmental courses required for both the AB and BS degrees are: Chem 121, 142, 143, 301, 302, 303, 304; Zool 325; Phys 201, 202 and 203; Math 263A and 263B. Ten hours of English are required.

For preparation for forestry, see curriculum outlined under Arts and Sciences special curricula section.

101 Principles of Biology (5)

(fall) Introduction to principles and concepts of life; emphasis on interrelationships of structural, functional, reproductive, evolutionary and ecological principles related to cells and organisms. (Same as Zool 101.) 3 lec, 2 lab.

102 Plant Biology (5)

Prereq: 101. (winter, spring) Morphology and physiology of vascular plant. Selected topics on evolution and life cycles in plant kingdom. 3 lec, 2 lab.

247 Vegetation of North America (3)

Prereq: 1 yr of biological science. (winter) *W. Wistendahl*. Illustrated lecture course considering extensive plant formations with relationship to climate, soil, geographic formations and influence of man. 3 lec.

248 Dendrology (5)

Prereq: 102. (fall) Collection, identification, nomenclature and classification of native and introduced woody plants, in leafy and winter conditions. 3 lec, 4 lab, 2 Saturday field trips.

307 Morphology of Nonvascular Plants (6)

Prereq: 102. (winter) *J. H. Graffius; J. Cavender*. Comparative studies of phylogenetic relationships, structural adaptations and life histories of algae, fungi and bryophytes. 4 lec, 4 lab.

308 Morphology of Vascular Plants (6)

Prereq: 307. (spring) *J. Fisher* Comparative studies of phylogenetic relationships, structural adaptations and life cycles of fern allies, ferns, gymnosperms and angiosperms. 4 lec, 4 lab.

309 Taxonomy of Flowering Plants (5)

Prereq: 102. (spring) *R. Lloyd; R. Scoffin*. Identification and classification of flowering plants with emphasis on family relationships. 3 lec, 6 lab, 3 Saturday field trips.

310 Principles of Mycology (5)

Prereq: 102. (spring) *J. Cavender; C. Miller*. Collection, isolation, cultivation and life-history studies on selected fungi of the major groups. 3 lec, 4 lab.

311 Biology and Human Affairs (3)

Prereq: 102. (fall) *Staff*. Discussions of impact of modern biological science upon human problems in biological, social, moral and political areas. No credit toward botany major requirement. Applies to the natural science requirement.

312 Plant Anatomy (5)

Prereq: 102. (fall) *J. Fisher*. Comparative structure and systematic anatomy of vascular plants. 3 lec, 3 lab.

313 Special Topics in Botany (1-6)

Prereq: perm. Current and/or special topics in botany.

368 Teaching of Biology (3)

Prereq: 18 hrs biological sciences. (fall, spring) Purposes of high school biology, instructional materials, classroom methods with emphasis on laboratory techniques, sources of laboratory equipment, supplies. 3 lec. No credit toward botany major requirement. Not applicable to Arts and Sciences natural science or 300-level requirements.

404 Undergraduate Research (2-6)

Prereq: 24 hrs botany and perm. Independent research under supervision of faculty member.

405 Discussions About Biology (2)

Prereq: 15-20 hrs biology (winter) Discussions of experimental problems and approaches focusing on a synthesis of ideas and principles in biological fields.

420 Fresh-Water Algae (5)

Prereq: 307 or 102, with perm. (fall) *J. H. Graffius*. Taxonomy and ecology of fresh-water algae, with emphasis on identification and distribution of common or representative genera. 3 lec, 4 lab.

424 Plant Physiology (6)

Prereq: Organic chemistry recommended. (winter) *L. Larson*. Basic chemical and physical aspects of plant processes: photosynthesis, respiration, mineral nutrition, transport, nitrogen metabolism, water relations and growth. 3 lec, 4 lab.

425 Plant Autecology (5)

Prereq: sr rank; course in plant physiology. (spring) *I. Ungar*. Effect of environmental factors on species growth and distribution. 3 lec, 4 lab, 1 Saturday field trip.

426 Plant Synecology (5)

Prereq: sr rank, course in plant taxonomy. (fall) *W. Wistendahl*. Natural plant communities. 3 lec, 4 lab, 1 Saturday field trip.

431 Cytology (5)

Prereq: 10 hrs biological science, 1 yr chemistry, Zool 325 recommended. (spring) *J. Braselton, J. Mitchell*. Gross and fine structure of cells; mitosis; meiosis; morphology; chemistry; behavior of nuclear and cytoplasmic constituents. 3 lec, 4 lab.

432 Microtechnique (5)

Prereq: sr rank and perm. (alternate fall, 1971) *J. Braselton*. Preparation of plant tissues for microscopic study. 6 lab.

450 Honors in Biology (5)

Prereq: students in the Honors College. (spring) *M. Jaffe*. Central ideas of modern biology with focus on several appropriate and current problems. Creative spirit in biology and in science as a whole. Similarities and differences of the process of discovery in art, philosophy and science. Primarily a reading course with discussions among the group.

475 Evolution (3)

Prereq: srs in botany, biology, zoology and perm. (winter) Principles of evolution discussed in terms of methods of analysis, rates, patterns and processes, and as a framework for various disciplines in science of botany. 3 lec.

H494 Honors in Botany (2-15)

Prereq: perm. Undergraduate research by qualified students.

BUSINESS ADMINISTRATION

111 History of American Business (3)

Origins and development of American business, emphasizing interrelations among business, the economy, the society and the polity.

445 Small Business Administration (4)

Place of small business organizations in our society; need for organizations in certain segments of business society; problems faced, opportunities involved and competitive considerations.

455 Studies in Business History (3)

Prereq: sr rank. Case studies of American business men and firms since early colonial period, with emphasis on the 20th century. Lessons from the past are examined in relation to present sound business policy.

460 Future of Information Management (4)

Prereq: Mgt 430 or BIC 430. Planning and implementing change in information systems. 10-yr look ahead for administrators. Information management changes required for decision making in both profit-centered and service-centered organizations.

465 Technology and the Environment (4)

Prereq: jr or sr rank. There is everywhere a great concern with 'things to come.' Real problem is not just to predict the future but how to anticipate, control and change it. Course is conceptual, inter-disciplinary and future oriented. Variety of developmental problems and interaction of many technological environments including social, political, economic, marketing, as well as technical.

470 Administrative Policy (4)

Prereq: C.B.A., sr rank. Integrated application of core studies to nature, functions and activities of actual business, analyzing objectives, policies and performance—all in relation to outside environment.

480 Ethics and Morality in Business (4)

Combined moral philosophy and personal responsibilities in actual business and administrative case decisions. These are most complicated of all, demanding critical analysis of contextual situation where provisional resolutions must be indirectly charted between *ethical oughts* and *economic musts*.

484 International Comparative Management (4)

Prereq: sr rank. Survey and analysis of similarities and differences in management systems, processes and styles, as well as evaluation of changes and their impact in selected groups of countries such as Britain, Czechoslovakia, West Germany, India, Israel, Japan, United States and U.S.S.R. Cross listed with Mgt 484.

491 Seminar (3, 4 or 5)

Prereq: perm. Selected topics of current interest in business administration area.

493 Readings (1-15)

Prereq: perm. Readings in selected fields of business administration. Topics selected by student in consultation with faculty member.

495 Research (3, 4 or 5)

Prereq: perm. Methodology, analysis of data and preparation of research findings.

497 Independent Research (1-15)

Prereq: perm. Research in selected fields of business administration under direction of faculty member.

BUSINESS AND INDUSTRIAL COMMUNICATIONS

220 Business and Industrial Communications I (3)

Prereq: soph rank. Application of communication principles to current business situations. Emphasis on research methodology, organization and interpretation of data and report writing.

320 Business and Industrial Communications II (3)

Prereq: 220 and jr rank or perm. Application of communication principles to current business situations. Emphasis on memoranda, policy statements, procedures, letters, interviews, group discussions.

420 Business and Industrial Communications III (3)

Prereq: 320 and sr rank or perm. Application of communication principles to current business situations. Emphasis on integrative nature of communication function in business and industrial environment. Written cases.

430 Information Management (4)

Prereq: sr rank or perm. Information networks and flows in organizations within a total-systems framework.

491 Seminar (3, 4 or 5)

Prereq: perm. Selected topics of current interest in business and industrial communications area.

493 Readings (1-15)

Prereq: perm. Readings in selected fields of business and industrial communications. Topics selected by student in consultation with faculty member.

495 Research (3, 4 or 5)

Prereq: perm. Methodology, analysis of data and preparation of research findings.

497 Independent Research (1-15)

Prereq: perm. Research in selected fields of business and industrial communications under direction of faculty member.

498 Internship (1-15)

Prereq: perm.

BUSINESS LAW

355 Legal Environment of Business I (4)
Prereq: jr or sr rank. Environmental approach to law of contracts and sales, including structure and process of American legal system.

356 Legal Environment of Business II (4)
Prereq: 355. Environmental approach to study of commercial paper and business associations, including agency, partnerships and corporations.

442 Law of Property (4)
Prereq: 356 or perm. Property law as an institution and analysis of creation, transfer and relation of various legal interests in property, especially land.

462 Law of Estates and Trusts (4)
Prereq: 356 or perm. Law as it pertains to decedents' estates including law of wills, intestate succession and trusts.

475 Government and Business (4)
Prereq: 355 or perm. Governmental regulatory environment of business including analysis of statutes, court decisions and rulings affecting policy decisions.

491 Seminar (3, 4 or 5)
Prereq: perm. Selected topics of current interest in business law area.

493 Readings (1-15)
Prereq: perm. Readings in selected fields of business law. Topics selected by students in consultation with faculty member.

495 Research (3, 4 or 5)
Prereq: perm. Methodology, analysis of data and preparation of research findings.

497 Independent Research (1-15)
Prereq: perm. Research in selected fields of business law under direction of faculty member.

CHEMISTRY

A student who completes the requirements for the BS degree with a major in chemistry is eligible for professional status in the American Chemical Society in the minimum period of two years of professional experience after graduation. Completion of the minimum requirements for the AB degree with a major in chemistry does not qualify a student for certification to the society.

The major requirement for the BS degree includes the following: 121-142-143; 305-306-307; 308-309; 400; 453-454-455; 456-457; 476; 484-485, and three additional hours (other than 499) above 400. Extra-departmental requirements include Math 263C and Phys 253, which should be completed by the end of the second year.

The major requirement for the AB degree includes the following: 121-142-143; 301-302 or 305-306-307; 303-304 or 308-309; 325 or 484-485; 351 or 453-454-455, and 476. A full year's work is required in at least one of the following fields: analytical (484-485-486); organic (305-306-307), or physical (453-454-455).

Students having foreign language requirements should take German. Those anticipating graduate study should obtain a reading knowledge of German and Russian or German and French. Details of the MS and PhD programs are given in the Graduate Bulletin.

A ten dollar breakage card will be required for all chemistry *laboratory* courses, the unused portion of which will be refunded.

Completion of the AB or BS degree requirements automatically completes the requirement of the College of Arts and Sciences of at least nine hours in the major at the junior-senior level.

121 Introduction to Chemistry (5)
Prereq: h.s. algebra, h.s. chemistry desirable. (fall, winter, summer) Open to students in all areas. Designed to provide an introduction to chemistry through study of atomic and molecular structure, bonding, states of matter and identification of materials.

122 Chemistry of Solutions (4)
Prereq: 121. (winter, spring, summer) Designed as an introduction to chemistry of solutions and concept of equilibrium. For students from the colleges of engineering and technology (except chemical engineering), education (except physical science comprehensive), other colleges and programs within arts and sciences requiring only 1 yr of chemistry. Credit not allowed for either 122 or 142.

123 Environmental Chemistry (4)
Prereq: 122 or perm. (spring, fall) Designed to survey organic chemistry, biochemistry and nuclear chemistry with emphasis upon day-to-day problems. May serve as a prerequisite for Zool 463 for HEFN-Option A students. Credit not allowed for either 123 or 143.

142 Chemical Energetics (5)
Prereq: 121, 3 yrs h.s. mathematics or Math 160A desirable. (winter, spring, summer) Designed as an introduction to thermodynamics

through study of solutions. Emphasis placed upon problem solving. Recommended for chemistry, preprofessional (biological science areas), chemical engineering, medical technology, zoology, physics, mathematics and secondary education—physical science comprehensive majors. Credit not allowed for either 122 or 142.

143 Quantitative Analysis (5)

Prereq: 142 or perm. (spring, fall) Introduction to quantitative techniques to include volumetric, gravimetric, electrochemical and colorimetric methods of analysis. Credit not allowed for either 123 or 143.

H190 Honors Chemistry (4)

Prereq: high school algebra, physics, chemistry and qualification by examination. For students with superior training in high school science and mathematics. Satisfies University College requirement of 1 yr of laboratory science. 3 lec, 3 lab.

H191 Honors Chemistry (4)

Prereq: H190. Continuation of H190. See H190 for description.

301 Organic Chemistry (3)

Prereq: 123 or 143 or H191. (fall and summer) Designed for students who are not BS chemistry majors and who do not require a full-year course in organic chemistry.

302 Organic and Biological Chemistry (3)

Prereq: 301. (winter, summer) Continuation of 301. See 301 for description.

303 Organic Chemistry Laboratory (1)

Prereq: 301 or 305, or with 301. (fall, spring, summer) Designed for students who are not BS chemistry majors. 3 lab.

304 Organic Chemistry Laboratory (2)

Prereq: 303. (winter, summer) Continuation of 303. See 303 for description. 6 lab.

305 Organic Chemistry (3)

Prereq: 143 or H191. Organic chemistry for chemistry majors and other students wishing to acquire a sound knowledge of classical and modern organic chemistry.

306 Organic Chemistry (3)

Prereq: 305. Continuation of 305. See 305 for description.

307 Organic Chemistry (3)

Prereq: 306. Continuation of 305-306. See 305 for description.

308 Organic Chemistry Laboratory (2)

Prereq: 306, or with 306. (winter) Synthesis, purification and characterization of organic compounds. 6 lab.

309 Organic Chemistry Laboratory (2)

Prereq: 308 and 307 or with 307. (spring) Continuation of 308. See 308 for description.

325 Instrumental Methods of Analysis (5)

Prereq: 143. (fall, winter) Analytical chemistry course for students not majoring in chemistry, which emphasizes application of instrumental methods to solution of problems in chemical analysis.

351 Physical Chemistry (4)

Prereq: 18 hrs chemistry; Math 160B or equiv. (fall) For premedicine, comprehensive science and AB chemistry majors. Topics include thermodynamics, thermochemistry, equilibrium, solutions, electrochemistry and kinetics.

400 Qualitative Organic Analysis (5)

Prereq: 307, 309. (fall, spring) Separation and identification of organic compounds. 3 lec, 6 lab.

420 Chemical Literature (3)

Prereq: 24 hrs, reading knowledge of German. Chemical literature in journals, handbooks, monographs and patents.

450 Principles of Quantum Chemistry (3)

Prereq: Math 263C or perm. (winter) Introduction to solution of problems concerning molecular structure and spectroscopy in terms of quantum theory.

453 Physical Chemistry (3)

Prereq: 143, Math 263C, Phys 253. Kinetic theory, structure of matter, thermodynamics, chemical equilibrium, solutions and rates of reactions.

454 Physical Chemistry (3)

Prereq: 453. Continuation of 453. See 453 for description.

455 Physical Chemistry (3)

Prereq: 454. Continuation of 453-454. See 453 for description.

456 Physical Chemistry Laboratory (2)

Prereq: 351 or 453.

457 Physical Chemistry Laboratory (2)

Prereq: 456. Continuation of 456.

458 Chemical Thermodynamics (3)

Prereq: 455. (fall)

460 Spectroscopic Methods in Organic Chemistry (3)

Prereq: 307, 455. (fall) Modern spectroscopic methods as employed in organic chemical research: NMR, IR, UV, ESR and mass spectrometry.

461 Introductory Quantum Chemistry (4)

Prereq: 455. (winter) Application of wave equation to simple physical systems of chemical interest. Mathematical techniques developed in use of quantum mechanical operators, differential equations and special functions as solutions to such problems as the hydrogen atom.

476 Modern Inorganic Chemistry (4)

Prereq: 351 or 453 or with 351 or 453. (fall) Considers relationship between physical and chemical properties of inorganic substances and nature of bonding and structures involved.

477 Synthetic Methods of Inorganic Chemistry (2-3)

Prereq: 476. (winter) Theoretical principles and practices of synthesis, purification and characterization of inorganic substances. 1 lec, 3-6 lab.

479 Radiochemistry (4)

Prereq: 143 or perm. (spring) Application of isotopes to problems in chemistry; safe handling of radioactive material; detection and determination of radiation.

480 Advanced Organic Chemistry (3)

Prereq: perm. (winter) Stereochemistry.

484 Electrochemical Methods of Analysis (5)

Prereq: 351 or 453. (alternate quarters) Modern electrochemical techniques with emphasis on their applications in analytical chemistry. Topics include potentiometry, specific ion electrodes, DC and AC polarography, pulse polarography, coulometry, chronocoulometry, cyclic voltammetry, rapid scan voltammetry.

485 Spectrochemical Analysis (5)

Prereq: 351 or 453. (alternate quarters) Survey of spectrochemical instrumentation with emphasis on their operation and application in analytical chemistry. Topics include atomic absorption, atomic emission, molecular absorption and molecular emission and will cover emission-absorption phenomena in the X-ray, ultraviolet, visible and infrared regions of electromagnetic spectrum.

486 Advanced Analytical Chemistry (4)

Prereq: 455. (winter) Fundamental principles of analytical chemistry; a rigorous treatment of equilibrium in aqueous and nonaqueous systems, precipitate formation, electrochemistry, stoichiometry and volumetric methods of analysis.

488 Chemical Instrumentation (4)

Prereq: 455. Fundamentals of electronics emphasizing circuitry in modern chemical instruments. 3 lec, 3 lab.

490 Introduction to Biochemistry (3)

Prereq: 307. (winter) Basic course in biochemistry which covers content and methodology of major areas of modern biochemical research.

491 Introduction to Biochemistry (3)

Prereq: 490. (spring) Continuation of 490. See 490 for description.

492 Introduction to Biochemistry (3)

Prereq: 491. (fall) Continuation of 491. See 490 for description.

**499 Undergraduate Research
(as recommended)**

Prereq: jr or sr rank with B average in chemistry or perm. Independent work for qualified upperclass chemistry majors.

CHINESE

See Linguistics

CLASSICAL LANGUAGES

Archaeology

Greek

Latin

The Latin major requirement for the AB degree is a minimum of 39 hours above courses 101-102-103, with at least nine hours of 400-level courses including 401 and 433.

A major in Greek is not offered, but Latin majors, especially those who are planning graduate study, are encouraged to take as much Greek as they can.

Archaeology

201 Introduction to Archaeology—Egypt (5)

(fall, 1970 and 1974) *H. Hultgren*. Aims, methods and techniques; general types of archaeological work and excavation. Open to students who have had 203 and/or 352, as well as to beginners.

203 Introduction to Archaeology—Rome (5)
(fall, 1971 and 1973) *H. Hultgren*. Similar to 201, but with emphasis on Roman sites and antiquities. Open to students who have had 201 and/or 352, as well as to beginners.

352 Archaeology of Greece (5)

Prereq: 201 or 203; or 18 hrs foreign language; or 12 hrs history or art history. (spring) *H. Hultgren*. Archaeology of Greece and Aegean Islands, with emphasis on Minoan and Mycenaean civilizations.

490 Independent Study (1-5, max 12)

Prereq: perm. *H. Hultgren*. Specialized study in archaeology for those students who have legitimate needs and interests not served by 201, 203 or 352.

Greek

101 Beginning Greek (4)

S. Foulk, H. Hultgren, A. Radko. Grammar, vocabulary and reading of ancient Attic Greek. Completion after 2 yrs of high school Greek adds 4 hrs to graduation requirement.

102 Beginning Greek (4)

Prereq: 101. Continuation of 101. See 101 for description. Completion after 2 yrs high school Greek adds 4 hrs to graduation requirement.

103 Beginning Greek (4)

Prereq: 102. Continuation of 101-102. See 101 for description. Completion after 2 yrs high school Greek adds 4 hrs to graduation requirement.

127 Greek Words in English (3)

P. Murphy. General and technical vocabulary derived from Greek. No knowledge of Greek required. No credit toward meeting foreign language requirement.

201 Greek Prose and Poetry (3)

Prereq: 103. *A. Radko*. Review of language principles. Readings adapted to needs and interests.

202 Greek Prose and Poetry (3)

Prereq: 201. Continuation of 201. See 201 for description.

203 Greek Prose and Poetry (3)

Prereq: 202. Continuation of 201-202. See 201 for description. Passing 203 fulfills foreign language requirements of College of Arts and Sciences for AB degree.

409 Advanced Greek Readings (2-4, max 18)

Prereq: 21 hrs. (on demand) Selections adapted to needs and interests.

Latin

101 Beginning Latin (4)

Grammar, vocabulary and reading. Completion after 2 yrs high school Latin adds 4 hrs to graduation requirement.

102 Beginning Latin (4)

Prereq: 101. Continuation of 101. See 101 for description. Completion after 2 yrs high school Latin adds 4 hrs to graduation requirement.

103 Beginning Latin (4)

Prereq: 102. Continuation of 101-102. See 101 for description. Completion after 2 yrs high school Latin adds 4 hrs to graduation requirement.

201 Intermediate Latin (4)

Prereq: 103 or 2-3 yrs high school Latin. Review of high school Latin. Reading of Cicero and Vergil. Completion after 4 yrs high school Latin adds 4 hrs to graduation requirement.

202 Intermediate Latin (4)

Prereq: 201. Continuation of 201. See 201 for description. Completion after 4 yrs high school Latin adds 4 hrs to graduation requirement.

203 Intermediate Latin (4)

Prereq: 202. Continuation of 201-202. See 201 for description. Passing 203 fulfills foreign language requirements of College of Arts and Sciences for AB degree. Completion after 4 yrs high school Latin adds 4 hrs to graduation requirement.

351 Latin Prose and Poetry (3)

Prereq: 203 or 4 yrs high school Latin, or 3 yrs high school Latin and perm. *S. Foulk*. Review of essential Latin. Reading of Cicero's essays, a play of Plautus or Terence, Horace's *Odes* and *Epodes*.

352 Latin Prose and Poetry (3)

Prereq: 203. Continuation of 351. See 351 for description.

353 Latin Prose and Poetry (3)

Prereq: 203. Continuation of 351-352. See 351 for description.

364 The Teaching of High School Latin (3)

Prereq: 203. (on demand) *H. Hultgren*. Content and methods of teaching high school Latin courses.

401 The Life of the Romans (3)

Prereq: 12 hrs or 12 hrs history and antiquities. (on demand) *H. Hultgren*. Family, house, transportation, public amusements. Illustrations from archaeological evidence. No knowledge of Latin required.

411 Latin Literature of the Republic (3)

Prereq: 353. (1972-73) Selections from works of Plautus, Terence, Caesar, Cicero, Lucretius, Catullus and Sallust.

412 Latin Literature of the Republic (3)

Prereq: 353. Continuation of 411. See 411 for description.

413 Latin Literature of the Republic (3)

Prereq: 353. Continuation of 411-412. See 411 for description.

415 Latin Literature of the Early Empire (3)

Prereq: 353. (1970-71) Selections from works of Vergil, Horace, Livy, Ovid, Martial, Tacitus, Juvenal and Pliny the Younger.

416 Latin Literature of the Early Empire (3)

Prereq: 353. Continuation of 415. See 415 for description.

417 Latin Literature of the Early Empire (3)

Prereq: 353. Continuation of 415-416. See 415 for description.

419 Readings in Latin Literature (3)

Prereq: 353. (1971-72) Selections complement students' other readings in Latin literature.

420 Readings in Latin Literature (3)

Prereq: 353. Continuation of 419. See 419 for description.

421 Readings in Latin Literature (3)

Prereq: 353. Continuation of 419-420. See 419 for description.

433 Advanced Latin Syntax (3)

Prereq: 353. (on demand) *P. Murphy*. Writing of Latin prose.

440 Special Work in Latin (1-6, max 12)

Prereq: 353. (on demand) Specialized work in selected phases of classical study.

COMPARATIVE ARTS

Courses in introduction to fine arts and history courses in individual content areas.

This sequence of courses is provided for majors in the College of Fine Arts who wish to study the relationship of all the arts, and for all students in the University who wish to elect courses with the basic purpose of understanding their cultural heritage.

The entire sequence of courses will operate as full-year courses on a three-quarter sequence; three quarter hours of credit for each quarter for a total of nine quarter hours.

The courses service the following areas:

1. As College of Fine Arts requirements for majors in the college.
2. As humanities requirements for College of Fine Arts majors and for students in University College.
3. As humanities requirements for students in other degree colleges and for transfer students from other universities.
4. Introductory courses serve as state requirements for certification in the College of Education.

117 Introduction to Fine Arts (3)

(fall) *A. Trisolini, staff*. Analysis of form, media and content of major arts stressing interrelationships of architecture, dance, dramatic art, music, literature and painting through recognition of common art factors.

118 Introduction to Fine Arts (3)

Prereq: 117. (winter) *A. Trisolini, staff*. Analysis of form, media and content of major arts stressing interrelationships of architecture, dance, dramatic art, music, literature and painting through recognition of common art factors.

119 Introduction to Fine Arts (3)

Prereq: 118. (spring) *A. Trisolini, staff*. Analysis of form, media and content of major arts stressing interrelationships of architecture, dance, dramatic art, music, literature and painting through recognition of common art factors.

303 History and Criticism of Courtroom Oratory (3)

Famous cases and methods of communication of masters of courtroom and judicial oratory. Cases, trials including Cicero, Strafford, Charles I, Erskine, Hastings, Marshall, Webster, Darrow, Sacco-Vanzetti.

304 History and Criticism of Political Oratory (3)

Methods of communication, rhetorical theories of masters of political oratory. Debates including Burke, Chatham, Pitt, Calhoun, Clay, Webster. Movements including nationalism, imperialism, social and political reform.

Comparative Arts

305 History and Criticism of 20th Century Oratory (3)

Methods of communication of masters of the period. Figures: Hitler, Mussolini, Lenin, Wilson, Churchill, Roosevelt, Kennedy, King. Movements: rhetoric of revolution, nationalism, facism, socialism, communism, republicanism.

311 History of Painting and Sculpture (3)

(fall) Periods, styles and great personalities from early times to present. Analysis of esthetic qualities in masterpieces of art.

312 History of Painting and Sculpture (3)

(winter) Periods, styles and great personalities from early times to present. Analysis of esthetic qualities in masterpieces of art.

313 History of Painting and Sculpture (3)

(spring) Periods, styles and great personalities from early times to present. Analysis of esthetic qualities in masterpieces of art.

317 Problems in Comparative Arts (3)

(fall) *A. Trisolini, B. Katz, H. White, R. Wortman*. Analysis of form, media and content of major arts stressing interrelationships of architecture, dance, dramatic art, music, literature and painting through recognition of common art factors. (not open to fr)

318 Problems in Comparative Arts (3)

(winter) Analysis of form, media and content of major arts stressing interrelationships of architecture, dance, dramatic art, music, literature and painting through recognition of common art factors. (not open to fr)

319 Problems in Comparative Arts (3)

(spring) Analysis of form, media and content of major arts stressing interrelationships of architecture, dance, dramatic art, music, literature and painting through recognition of common art factors. (not open to fr)

321 History and Literature of Music (3)

Prereq: Mus 103. History of music with survey of musical literature to 1450.

322 History and Literature of Music (3)

Prereq: Mus 321. History of music with survey of musical literature, 1450-1720.

323 History and Literature of Music (3)

Prereq: Mus 322. History of music with survey of musical literature, 1720 to present.

334 Aspects of Film (3)

(fall, winter) Examination of basic motion picture structure; survey of various genera

(dramatic, documentary, imagist), exercise in film analysis and criticism. Weekly screenings.

335 Film Techniques (3)

Prereq: 334 or perm. (spring) Survey of basic production techniques; advanced analysis of film forms. Participation in film-making workshop.

336A Narrative Film (3)

Prereq: 334 or perm. (fall) History of the story motion picture with emphasis on contemporary film makers.

336B Studies in the Documentary Film (3)

Prereq: 334 or perm. (winter) Development of naturalist and polemic traditions; intensive study of modern cinema verite.

336C Studies in the Experimental Film (3)

Prereq: 334 or perm. (spring) Evolution of imagist films and concepts of integral cinema. History of "experimental" cinema.

351 History of Architecture (3)

(fall) Development of architecture with emphasis on environmental influences. Illustrated lec.

352 History of Architecture (3)

(winter) Development of architecture with emphasis on environmental influences. Illustrated lec.

353 History of Architecture (3)

(spring) Development of architecture with emphasis on environmental influences. Illustrated lec.

370 History of Theater (3)

(fall) Dramatic literature, physical theater, audience and production conditions from prehistoric periods to early 20th century.

371 History of Theater (3)

(winter) Dramatic literature, physical theater, audience and production conditions from prehistoric periods to early 20th century.

372 History of Theater (3)

(spring) Dramatic literature, physical theater, audience and production conditions from prehistoric periods to early 20th century.

470 Greek Theater and Drama (4)

Drama, theater and audience in ancient Greece. 3 lec.

471 Roman and Medieval Theater (4)

Intensive study of drama and theater of Rome and Medieval Europe. 3 lec.

- 472 Renaissance Theater and Drama (4)**
Development of European theater and drama in the Renaissance. 3 lec.
- 473 Restoration and 18th Century Theater (4)**
Drama, theater and audience in England from the Restoration through the 18th century. 3 lec.
- 474 Baroque European Theater (4)**
Detailed study of theater and drama of Europe in the Baroque period. 3 lec.
- 475 19th Century European Theater (4)**
Major developments in drama and theater in Europe during the 19th century. 3 lec.
- 476 Contemporary Theater (4)**
Trends and developments in 20th century theater. 3 lec.
- 477 American Theater and Drama (4)**
Development of theater and drama in North America from colonial to modern times. 3 lec.
- 481 Individual Problems (1-6)**

COMPUTER SCIENCE

See Mathematics

DANCE

- 101 Introduction to Dance I (5)**
Prereq: perm of instructor. Basic dance technique, improvisation and composition. Survey of dance in the 20th century.
- 102 Introduction to Dance II (5)**
Prereq: 101 or equiv. Basic dance technique, improvisation and composition. Survey of dance in the 20th century.
- 103 Introduction to Dance III (5)**
Prereq: 102 or equiv. Basic dance technique, improvisation and composition. Survey of dance in the 20th century.
- 111 Music for Dance I (2)**
Nature and principles of rhythmic structure in dance and music.
- 120 Dance Technique (2)**
(A) Modern dance, (B) ballet, (C) ethnic dance.
- 201 Dance Theory and Practice I (5)**
Prereq: 103 or equiv. Intermediate dance technique, improvisation and composition. Anthropological basis for dance as evidenced in ritual and mythic forms.
- 202 Dance Theory and Practice II (5)**
Prereq: 201 or equiv. Intermediate dance technique, improvisation and composition. Anthropological basis for dance as evidenced in ritual and mythic forms.
- 203 Dance Theory and Practice III (5)**
Prereq: 202 or equiv. Intermediate dance technique, improvisation and composition. Anthropological basis for dance as evidenced in ritual and mythic forms.
- 212 Dance Notation I (2)**
Prereq: perm of instructor. Principles of dance notation.
- 220 Dance Technique II (2)**
Prereq: 120 or equiv. (A) Modern dance, (B) ballet, (C) ethnic dance.
- 240 Laboratory in Educational Dance (1, max 12)**
Prereq: perm of instructor. Opportunity to be an apprentice and to do supervised teaching in Dance Laboratory School. May be repeated.
- 250 Ethnic Dance of Non-Western Cultures (2)**
Dances from selected non-Western cultures with emphasis on style and related folklore.
- 255 Ethnic Dance of Western Cultures (2)**
Dances from selected Western cultures with emphasis on style and related folklore.
- 301 Advanced Dance Theory and Practice I (5)**
Prereq: 203 or equiv. Advanced dance technique and choreography. Analysis of contemporary and historical dance works.
- 302 Advanced Dance Theory and Practice II (5)**
Prereq: 301 or equiv. Advanced dance technique and choreography. Analysis of contemporary and historical dance works.
- 303 Advanced Dance Theory and Practice III (5)**
Prereq: 302 or equiv. Advanced dance technique and choreography. Analysis of contemporary and historical dance works.
- 312 Music for Dance II (2)**
Prereq: 111 or equiv. Also for music composition majors who wish to write for dance theater. History of music for dance. Choreographer-composer relationship.

Design

320 Dance Technique III (2)

Prereq: 220 or equiv. (A) Modern dance, (B) ballet, (C) ethnic dance.

351 Dance Cultures of the World I (4)

Introduction to dance cultures of the world (excluding Western art dance). Function of dance in society and its relationship to other arts.

352 Dance Cultures of the World II (4)

Introduction to dance cultures of the world (excluding Western art dance). Function of dance in society and its relationship to other arts.

353 Dance Cultures of the World III (4)

Introduction to dance cultures of the world (excluding Western art dance). Function of dance in society and its relationship to other arts.

380 University Dance Company (1, max 12)

Prereq: perm of instructor and audition. Participation in performing company. May be repeated.

401 Independent Choreography and Experimental Production I (5)

Prereq: 303 or equiv. Advanced dance technique and experimental dance production.

402 Independent Choreography and Experimental Production II (5)

Prereq: 401 or equiv. Advanced dance technique and experimental dance production.

403 Independent Choreography and Experimental Production III (5)

Prereq: 402 or equiv. Advanced dance technique and experimental dance production.

411 Dance Notation II (2)

Prereq: 212 or equiv. Continuation of 212 with more advanced reading and writing in notation.

413 Dance Notation III (3)

Prereq: 411 or equiv. Continuation of 411 with more advanced reading and writing in notation.

420 Dance Technique IV (2)

Prereq: 320 or equiv. (A) Modern dance, (B) ballet, (C) ethnic dance.

441 Teaching Dance I (2)

Prereq: at least 1 qtr 240 or equiv taken concurrently. Principles of teaching dance and their practical application. Dance for children.

442 Teaching of Dance II (2)

Prereq: at least 1 qtr of 240 or equiv taken concurrently. Principles of teaching dance and their practical application. Dance for adolescents.

443 Teaching of Dance III (2)

Prereq: at least 1 qtr of 240 or equiv taken concurrently. Principles of teaching dance and their practical application. Dance for adults.

471 History of Dance I (4)

Development of Western dance in the 19th and 20th centuries with emphasis on ballet and modern dance.

472 History of Dance II (4)

Survey of dance forms and their functions; dance motivation from sympathetic magic in tribal societies; in mythic ritual and in dance-drama.

473 History of Dance III (4)

Survey of dance from early Christian church through Baroque period.

480 Production Problems for Dance Theater (2)

Prereq: perm of instructor. Production problems involved with dance events including design, lighting, costume and administrative procedures.

490 Independent Study (1-10)

Prereq: perm of instructor.

DESIGN

330 Typography (4)

Prereq: 331, Jour 221. Typography as a designer's tool. Emphasis upon experimental type design, setting type and practical application of abstract approaches to type.

331 Design Core Studio III (6)

Prereq: EnvD 403, perm. Interdisciplinary problem solving team. Discovery of individual directions as applied to practical problem solving, involving all design majors as a professional team dealing at times as a unit with both practical and conceptual problems, ranging in scope from university and community to current popular market and global needs. Students will investigate different specialized satellite courses in graphic and industrial design and fine arts to bring a variety of disciplines to bear upon the core studio. Students function independently or in groups, and also as a total interdisciplinary team.

332 Design Core Studio III (6)

Prereq: 331 and perm. Continuation of 331. See 331 for description.

333 Design Core Studio III (6)

Prereq: 332 and perm. Continuation of 331-332. See 331 for description.

334 Illustration I (4)

Prereq: EnvD 403, 442. Magazine, product and book illustration. Required of all majors.

335 Illustration II (4)

Prereq: 334. Continuation of 334. Required of all majors.

336 Illustration III (4)

Prereq: 335. Continuation of 335. Required of all majors.

337 Media Graphics (4)

Prereq: 331. Graphics for media presentations: film, television, 35 mm slides and overhead projection.

338 Film Animation (4)

Prereq: 331 and perm. Film animation and graphic design problem.

339 Packaging Graphics (4)

Prereq: 331 and perm. Examination of 3-dimensional graphic design problems.

421 Clay Modelling (4)

Prereq: 333. Technique of form manipulation.

422 Bionics (4)

Prereq: 333 and perm. Study of natural form as applied to design.

423 Consumer and Industrial Products (4)

Prereq: 333 or perm. Conception, rendering, design of consumer and industrial products.

431 Design Core Studio IV (6)

Prereq: 333 or perm. Model design studio, utilizing individual directions in team solutions. Real design problems from local to national and global concerns. Problems requiring brochures, booklets, posters, symbols, media (slide and film and television), products, production procedures, prototypes, research and educational communication both 2- and 3-dimensional.

432 Design Core Studio IV (6)

Prereq: 431. Continuation of 431. See 431 for description.

433 Design Core Studio IV (6)

Prereq: 432. Continuation of 431-432. See 431 for description.

434 Advanced Illustration I (4)

Prereq: 336. Advanced problems in illustration.

435 Advanced Illustration II (4)

Prereq: 434. Continuation of 434.

436 Advanced Illustration III (4)

Prereq: 435. Continuation of 435.

438 Layout and Art Direction (4)

Prereq: 333 or perm. Development of concepts for complex commercial and educational problems. Creative direction of production services: illustration, photography, key line and printing.

439 Exhibit Design (4)

Prereq: 337. Design of displays, exhibits and presentations with primary emphasis on presentations geared to a public audience.

495 Design Problems (1-12)

Prereq: perm. Supervised group or individual projects.

DESIGN, ENVIRONMENTAL

151 Comparative Analysis of Humanities and Design (3)

Introduction to design and human behavior with special emphasis upon relevance of humanities and social sciences.

152 Comparative Analysis of Humanities and Design (3)

Prereq: 151, perm. Continuation of 151. See 151 for description.

153 Comparative Analysis of Humanities and Design (3)

Prereq: 152, perm. Continuation of 151 and 152. See 151 for description.

251 History of Environmental Design of the Ancient World (3)

History of interaction of man and his physical environment with particular emphasis upon relationship of cultural forces and visual forms of major historical periods of Western world.

252 History of Environmental Design of Medieval and Renaissance Periods (3)

Prereq: 251, perm. Continuation of 251. See 251 for description.

253 History of Environmental Design of Baroque and Modern Periods (3)

Prereq: 252 or perm. Continuation of 252. See 251 for description.

301 Elementary Environmental Design (4)

Prereq: 151 concurrently; h.s. physics or equiv; Math 140A or 263A or concurrently; or perm. Investigation into nature of visual stimulation, both natural and man-made; problems in understanding and organizing perceptual stimuli of human environment as design.

302 Elementary Environmental Design (4)

Prereq: 301 or perm. Continuation of 301. See 301 for description.

303 Elementary Environmental Design (4)

Prereq: 302 or perm. Continuation of 301 and 302. See 301 for description.

401 Intermediate Environmental Design (5)

Prereq: 153, 303, Architectural Aptitude Test; or perm of director. Understanding and organizing elements of human environment; investigating interaction of these elements, use of design elements in solution of programmatic problems of human environment.

402 Intermediate Environmental Design (5)

Prereq: 401 or perm of director. Continuation of 401. See 401 for description.

403 Intermediate Environmental Design (5)

Prereq: 402. Continuation of 401 and 402. See 401 for description.

461 Introduction to Materials, Methods and Structure (3)

Prereq: Math 140A or 263A or perm. Investigation of properties and applications of materials, systems and construction techniques.

462 Introduction to Materials, Methods and Structure (3)

Prereq: 461. Continuation of 461. See 461 for description.

471 Introduction to Urbanism (3)

Nature of cities and urban regions, with emphasis on historical and current trends and forces shaping urban growth and development.

472 Introduction to Urbanism (3)

Prereq: 471 or perm. Continuation of 471. See 471 for description.

495 Special Problems in Environmental Design (1-3, max 12)

Prereq: written perm of director. Supervised group or individual projects.

DESIGN, GRAPHIC

330 Lettering (4)

Prereq: basic design program or perm. (fall, winter) Examining studio production of lettering, lettering as a design element, history and technique of lettering. Required of all majors.

339 Packaging Graphics (4)

Prereq: 332 or perm. (winter, spring) Examination of 3-dimensional graphic design problems.

430 Advanced Graphic Design I (4)

Prereq: 335 or perm. (fall) Advanced 2-dimensional graphic design problems. Continued study of design of brochures, booklets, posters, folders, books, pamphlets, signs, logotypes and symbols. Required of all majors.

431 Advanced Graphic Design II (4)

Prereq: 430 or perm. (winter) Advanced 3-dimensional graphic design problems. Required of all majors.

432 Advanced Graphic Design III (4)

Prereq: 431 or perm. (spring) Advanced 2- and 3-dimensional design problems. Required of all majors.

DESIGN, INDUSTRIAL

321 Elementary Industrial Design (3)

Prereq: EnvD 401 or perm. (winter, spring) History, philosophy and practices of industrial design profession; development of exploratory design concepts related to space, movement and form; emphasis on design theory and creative thinking.

327 Design Materials (4)

Prereq: 322 or perm. Exploration of design materials and processes, involving problems in paper, wood, metal, plastics; 3-dimensional surface development, clay modeling and model construction.

328 Design Materials (4)

Prereq: 327 or perm. Continuation of 327. See 327 for description.

329 Package Design (4)

Prereq: 328 or perm. Continuation of 327-328. See 327 for description.

421 Advanced Industrial Design (4)

Prereq: 326 or perm. Developmental research, conceptual design investigation and formal presentation of professional design solutions.

422 Advanced Industrial Design (4)

Prereq: 421 or perm. Continuation of 421. See 421 for description.

423 Advanced Industrial Design (4)

Prereq: 422 or perm. Continuation of 421-422. See 421 for description.

424 Design Research (4)

Prereq: 326 or perm. Advanced problems of theory and practice involving directed research methods, conceptual systems design and development projects and formal presentation techniques.

425 Design Research (4)

Prereq: 424 or perm. Continuation of 424. See 424 for description.

426 Design Research (4)

Prereq: 425 or perm. Continuation of 424-425. See 424 for description.

427 Prototype Model Development (4)

Prereq: 329 or perm. Development, fabrication and construction of full-size prototype models for appearance evaluation, market research, production tooling development, packaging and engineering studies and product planning research.

428 Prototype Model Development (4)

Prereq: 427. Continuation of 427. See 427 for description.

429 Prototype Model Development (4)

Prereq: 428. Continuation of 427-428. See 427 for description.

ECONOMIC EDUCATION

446 Economics in the Curriculum (3-5)

For elementary and secondary teachers to provide (a) recognition of value of a disciplined analysis, (b) discovery of economic concepts in an orderly unfolding, (c) demonstrated reasoning about economics and (d) examination and analysis of representative teaching materials. Course may be taken only once.

447 Economic Analysis and its Application to the Curriculum (3-5)

Continuation of 446. Designed to emphasize methods of inquiry employed by economists and their application to theories of instruction.

448 Economic Policy and its Application to the Curriculum (3-5)

Continuation of 447. Designed to provide application of economic analysis to economic policy and courses of study.

449 Economic Education Programs (3-5)

Economic education in schools. Administrative and organizational structures, current curriculum development projects, essential economic understandings that should be taught and their place in curriculum, ways to improve economic education and economic education organizations.

491 Seminar (3, 4 or 5)

Prereq: perm. Selected topics of current interest in economic education area.

493 Readings (1-15)

Prereq: perm. Readings in selected fields of economic education. Topics selected by student in consultation with faculty member.

495 Research (3, 4 or 5)

Prereq: perm. Methodology, analysis of data and preparation of research findings.

497 Independent Research (1-15)

Prereq: perm. Research in selected fields of economic education under direction of faculty member.

ECONOMICS

Majors in economics must complete the BA degree requirements in the College of Arts and Sciences and take at least 36 hours of work in economics, including eight quarter hours of Principles of Economics, Econ 303, 304 and 431. Econ 405 is recommended.

101 Principles (4)

Prereq: not open to jrs and srs. Basic theory and economic analysis of prices, market, production, wages, interest, rent and profits. Economic problems and economic institutions of society.

102 Principles (4)

Prereq: 101. Continuation of 101. See 101 for description.

H297 Economics for Honors College Students (4)

Prereq: enrollment in Honors College. Economic theory, history and statistics. Development of analytical framework for understanding contemporary economic issues and trends. Discussion, problem-solving, reports emphasizing student participation.

H298 Economics for Honors College Students (4)

Prereq: H297. Continuation of H297. See H297 for description.

301 Principles (4)

Prereq: not open to fr or soph or to those who have had 101 and 102. Description same as for 101-102, but content treated at more advanced level.

302 Principles (4)

Prereq: 301. Continuation of 301. See 101 for description, but content treated at more advanced level.

303 Economics of the Firm (4 or 5)

Prereq: 102 or 302. Price system as an allocative mechanism. Price and production policies of individual firms and consumers under alternative market conditions and analysis of these policies on social efficiency of resource allocation. Students are expected to have an understanding of elementary algebra and geometry.

304 National Income and Employment Analysis (4 or 5)

Prereq: 102 or 302. Factors which determine level of nation's economic activity and are responsible for growth and stability in nation's economy. Part of course devoted to measures of national income while remainder consists of analysis of interrelationships among production, price levels, relative prices, employment and capital formation. Students are expected to have an understanding of elementary algebra and geometry.

323 Money, Banking and Economic Activity (4)

Prereq: 102 or 302. Nature of money, debt and credit; relations between money and finance and economic activity. Functioning of commercial banking system and other financial institutions. Operations and powers of Federal Reserve System and Treasury. Monetary policy and monetary theory. Cross listed with Fin 323.

340 Current Economic Problems (4)

Prereq: 102 or 302 or perm. Application of economic theory to current economic problems with emphasis upon public policy implications. Depressed areas, technological unemployment, economic growth, inflation and agricultural instability considered.

405 History of Economic Thought (3 or 4)

Prereq: 102 or 302. Evolution of major economic doctrines; mercantilists and cameralists, physiocrats, Adam Smith and classical school,

historical school, Austrian school, Alfred Marshall and neoclassicists.

406 Modern Economic Thought (3 or 4)

Prereq: 102 or 302. Contributions to economics of most significant writers since Alfred Marshall.

407 Institutional Economics (4)

Prereq: 102 or 302. Economic theory and policy contributions of Veblen, Commons, Ayres and other modern dissenters from traditional economic thought. Principles of technological progress and institutional adjustment; influence on contemporary theory and policy.

415 Economic History of the United States (4 or 5)

Prereq: 102 or 302. Economic factors in development of United States including historical growth of economic institutions such as banking, manufacturing, labor unions and agriculture, from colonial times to present.

416 European Economic History (4 or 5)

Prereq: 102 or 302. Economic growth of developed countries. Focus on industrial revolutions in Great Britain, France, Germany, Soviet Union and Japan. Historical experience of these countries related to various theories of economic change.

418 Agricultural Development (4)

Prereq: 102 or 302. Patterns of agricultural development in United States and selected foreign areas; technological and demographic changes in agriculture; socio-economic problems; marketing arrangements; case studies of specific agricultural development projects.

420 Economic Development (4)

Prereq: 102 or 302. Nature of, obstacles to and future possibilities for economic growth of nations. Special emphasis given to problems of underdeveloped countries. Studies of selected countries utilized.

421 African Economic Development (4)

Prereq: 420 or perm. Economic characteristics of African societies as traditional economies and in process of modernization.

422 Chinese Economy (4 or 5)

Prereq: 420 or perm. Introductory familiarization with Chinese economy. China's early industrialization, 1880-1931, socialist transformation of each economic sector, 1949-1966, overall performance of Chinese economy and each economic sector and Maoist revision of orthodox Marxist-Leninist economic doctrines.

423 Economy of Latin America (4)

Prereq: 420 or perm. Characteristics of economies of Latin American countries. Particular emphasis on prospects for economic development of the region and nature and origin of institutional obstacles to economic change. Economic heritage of colonial period and subsequent evolution of economic institutions, resources of the area and their utilization and trends in economic activity and policy in post-World War II period.

425 Comparative Economic Systems (4)

Prereq: 102 or 302. Theoretical and institutional characteristics of capitalism and socialism with specific emphasis on prevailing economic systems in United States, England and Russia.

426 Economics of the Soviet Union (4 or 5)

Prereq: 102 or 302. Operation of economy of Soviet Union. Allocation of resources, planning saving and investment, agriculture, public finance, price system and international trade.

428 Regional Analysis (4 or 5)

Prereq: 102 or 302. Theories of regional and interregional relationships and policies for regional development. Consideration of economic, geographic, demographic, political and social factors.

429 Economics of Planning (3 or 4)

Prereq: 102 or 302 and perm. Economics of planning and its major applications to private and public planning; national, regional and local planning; centralized and decentralized planning. Procedures and techniques of planning: organization, economic analysis, social accounting, input-output analysis, linear programming, location theory, industrial complex analysis; gravity, potential and spatial models, computers and planning; research and development.

430 Introduction to Mathematical Economics (4 or 5)

Prereq: 102 or 302 and perm. Mathematical analysis in economics. Calculus and matrix algebra techniques used prominently in economics literature, together with their application to selected problems in economics.

431 Statistics for Economists (4)

Prereq: perm. Statistical methods used in economics with special emphasis on time series and regression analyses.

432 Programming Models for the Firm (4 or 5)

Prereq: 303 or perm. Linear, non-linear and dynamic programming discussed as possible

explanation of firm behavior. Social consequences of resource allocation under these models discussed.

435 Introduction to Econometrics (4 or 5)

Prereq: 303, 304, 430, 431 or perm. Applications of statistics to economics. Design and estimation of economic models. Estimation of simultaneous equation systems.

441 Fiscal Policy (4)

Prereq: 102 or 302. Roles played by government expenditures, taxes and debt in maintaining full employment, price stability and economic growth.

442 Economic Fluctuations (4)

Prereq: 102 or 302. Nature and causes of economic fluctuations, basic economic cycles, theories and their application in business world. Emphasis on advanced economic theory, on stabilization policies and analysis of stability of equilibrium.

443 Economics of the Environment (4)

Prereq: 102 or 302. Economic analysis of such environmental matters as air, water and noise pollution, population growth and land use. Emphasis placed on use of economic theory and empirical research in evaluating environmental policies.

451 Monetary Policy (4)

Prereq: 323. Policy making machinery of monetary institutions. Relationship of Federal Reserve System, Treasury and commercial banking system; case studies in formulation and implementation of monetary policy. Effectiveness of monetary policy actions. Cross listed with Fin 451.

453 Monetary History of the United States (4)

Prereq: 323. Correlation of developments in American history with development of monetary institutions, policy and theory. Evolution of commercial and central banking and relationship of these to economic activity in history of United States.

460 Organization and Structure of Industry (4)

Prereq: 102 or 302. Market structure, market conduct and market performance in American industry. Emphasis on developing a theoretical framework for evaluating efficiency of industry. Merger activity examined historically and its causes determined. Characteristics of principal manufacturing and processing enterprises evaluated. Contribution of theory of industrial organization to macroeconomic theory and microeconomic theory discussed.

461 Economic Policy and Industrial Organization (4)

Prereq: 102 or 302. Social consequences of monopoly and competition. Various policy prescriptions dealing with economic concentration and market structure considered, as well as impact of these policies on United States business. Government regulation of business reviewed and evaluated.

462 Government and Agriculture (4 or 5)

Prereq: 102 or 302. Problems of American agriculture as an industry; economics of government policies and programs; consideration of forces and objectives in policy formation.

463 Economics of Government (3 or 4)

Prereq: 102 or 302. Role played by government as user of economic resources and redistributor of incomes. Some questions explored: need for government's entry into economy, optimal size of government, selection of tax and expenditures schemes and effects of government economic activity on private sector.

464 Economics of Defense (4 or 5)

Prereq: 102 or 302. Theoretical and practical approach to government procurement, contracting and implementation of efficient allocation of resources. Economic approaches and analysis of military procurement problems in determining fiscal effects on economy. Methodology and utilization of business methods for greater insight on government defense budgeting. Special emphasis on aircraft/aerospace industry.

468 Economics of Transportation (3 or 4)

Prereq: 102 or 302. Economics of transport pricing; regulations of transport and national transport policy.

469 Public Utilities (3 or 4)

Prereq: 102 or 302. Economic basis of public utility concept and its relation to business organization. Nature, scope, development, legal organization and regulation of public utilities.

470 Labor Economics (4)

Prereq: 102 or 302. Economic forces generating modern labor problems. History of labor movement; labor in politics; labor-management relations; wages and full employment.

471 Labor Legislation (4)

Prereq: 102 or 302. Law bearing upon labor problems. Labor-relations legislation, old-age

and unemployment insurance, workmen's compensation and wages-and-hours legislation.

475 Economics of Poverty (4)

Prereq: 102 or 302 or perm. Incidence, causes and consequences of poverty in the United States. Economic theory, history, statistics applied to analysis of poverty-reduction measures.

476 Economics of Human Resources (4)

Prereq: 102 or 302. Current developments in theory, empirical research and policy with respect to investment in human resources, economic value of education, manpower programs and growth.

480 International Economics (4)

Prereq: 102 or 302. Economic relations of nations of the world. Some of topics considered are: economic basis for international trade and investment; mechanics of international exchange; tariffs, quotas, exchange control, cartels and state trading as devices of economic nationalism; and international economic cooperation with special reference to organizations affiliated with United Nations.

481 International Economic Policy (4)

Prereq: 480. Current economic developments of foreign and United States economic policy. National and international aspects of policy will include tariffs, controlled trade, international agreements, commercial treaties, foreign exchange control, clearing agreements, international liquidity controversy and contemporary balance of payments problems. Roles of institutions such as world bank and International Monetary Fund discussed with emphasis on interaction of domestic and international goals and policies.

491 Seminar (3, 4 or 5)

Prereq: perm. Selected topics of current interest in economics area.

493 Readings (1-15)

Prereq: perm. Readings in selected fields of economics. Topics selected by student in consultation with faculty member.

495 Research (3, 4 or 5)

Prereq: perm. Methodology, analysis of data and preparation of research findings.

497 Independent Research (1-15)

Prereq: perm. Research in selected fields of economics under direction of faculty member.

EDUCATION

Audio-Visual Education

Elementary Education

Guidance, Counseling and
Student Personnel Services

International Comparative
Education and Educational
Foundations

Professional Laboratory
Experiences

Secondary Education

Special Education

Audio-Visual Education

480 Introduction to Educational Media (4)

Prereq: jr rank. *P. Cain, S. Oates*. Application of principles of instructional materials and media to teacher-student communication. Basic experiences provided in production of instructional materials and equipment operation.

481 Production of Instructional Materials (4)

Prereq: jr rank and 480, or perm of instructor. *P. Cain*. Develops basic pattern for preparation of a wide variety of locally produced, inexpensive instructional materials. Includes laboratory experience in the manipulation of pictures, lettering, coloring, preservation and reproduction techniques used in creating instructional pictures, slides, transparencies and other projected and non-projected materials.

Elementary Education

200 Studies of Children (4)

Prereq: admission to teacher education. *J. Brunk, S. Navin*. Bases for a developmental theory of education; growth sequences through adolescence; principles of development, behavior, and learning; techniques of child-study; systematic observation in University Laboratory School; implications for educational practice.

304 The Development of Kindergarten Education (3)

Prereq: 200 or HEC 160. *E. Starks*. History, development, philosophy and current trends in kindergarten education.

305 Materials and Methods in Kindergarten-Primary Education (3)

Prereq: 200 and 304. *E. Starks*. Work and play activities of early childhood and development, use and care of materials best suited to this age group.

310 The Teaching of Reading and Language Arts in the Elementary School (6)

Prereq: jr standing in teacher education. *W. Cooper, B. Morgan, staff*. Preservice preparation for developmental teaching of reading; text and supplementary readings, lectures and discussions, films and other resources, observations and projects for practical competence.

321 Children's Literature (4)

Prereq: jr standing in teacher education. *R. Pinney*. Criteria for selection of children's literature, children's reading interests, preparation of materials for use in literature program, use of choral reading and verse choir, and reading of outstanding literature for children.

330 Teaching of Mathematics in the Elementary School (4)

Prereq: Math 120 and jr standing in teacher education. *C. Smith, R. Underhill*. Methods of teaching numbers, numeration, operations, relations, problem solving, measurement, and geometry.

340 Teaching of Science in the Elementary School (4)

Prereq: jr standing in teacher education; 12 hrs of science including biology and physical science. *L. Mills, P. Ploutz*. Materials and methods of teaching science in elementary schools. Textbooks, science equipment, and related instructional materials used in lab lessons.

350 Teaching of Social Studies in the Elementary School (4)

Prereq: 12 hrs of social science including Geog 121, jr standing in teacher education. *M. Felsinger, A. Leep, H. Olsen*. Materials and methods in teaching content subjects in elementary schools with special emphasis upon practical experience in social studies unit teaching and skills.

400 Advanced Studies of Children (3)

Prereq: 20 hrs of education or psychology. *J. Brunk, S. Navin*. Intensive study of biological and environmental influences on human development from conception to maturity.

407 Evaluation in the Elementary School (3)

Prereq: 16 hrs of education. *Staff*. Standardized tests in elementary school with emphasis on selection, interpretation and use. Teacher-made tests, check lists, rating scales and anecdotal records. Elementary statistical treatment of test scores and grading.

411 Diagnosis and Treatment of Reading Disabilities (4)

Prereq: 310, perm. *W. Cooper, B. Morgan*. Correlates of variability in reading proficiency. Incidence of retardation and disability. Proposed causes of failure and concept of multiple causation. Specialized materials and instructional efforts. Systematic observation of cases of reading disability and preparation of case report.

412 Reading Laboratory Practicum (4, max 12)

Prereq: sr rank. Application of developmental approach to problem cases in reading instruction, participation in diagnostic examination, parent and teacher conferences, individual procedures in tutoring, staffing of cases and preparation of reports. (Weekly group discussion period, lab sessions arranged.)

430 Modern Elementary Mathematics Curriculum (3)

Prereq: 330. *C. Smith, R. Underhill*. Modern elementary mathematics curriculum with emphasis on why changes are occurring. Nature of changes as reflected from experimental programs; effect of changes on methods of teaching. Implementation of these changes in classroom.

460 The Child and the Curriculum (4)

Prereq: student teaching. *K. Weimer*. Emphasis on service role of curriculum to children and society.

490 Study in Elementary Education (2-15)

Prereq: perm of dept chairman. Independent and/or group study of some special interest and concern (problems, area, questions) under guidance of staff; assigned and suggested readings and other resources and experiences; frequent conferences; preparation of final report.

Guidance, Counseling and Student Personnel Services

400 Seminar in Student Personnel Programs (3)

Need, value and philosophy of student personnel work in higher education. Fundamen-

tal concepts, principles and techniques of student residence programming, human behavior and higher education.

410 Human Relations (3)

Interpersonal relationships, both content and process oriented. Lectures and discussion groups focus upon dynamics of human relationships, factors fostering effective interaction and significance of self concepts in human communication.

420 Guidance Practices in Elementary Schools (4)

Need, scope and nature of elementary guidance are surveyed. Major emphasis on teacher's guidance responsibilities. Guidance approaches and procedures examined for their usefulness in working with children and parents. Techniques of appraising and changing attitudes and behavior studied. Roles of elementary school counselor and other pupil personnel specialists reviewed for their contribution to growth and development of children. Opportunity for students to achieve greater self-understanding through involvement in self appraisal.

430 Guidance in American Secondary Schools (4)

Basic foundations of high school guidance. Introduction to dynamics of adolescent. Use of pupil-centered appraisal tools and procedures, community resources and informational services.

440 Foundations in Group Dynamics (4)

General principles and basic techniques of group dynamics. Interaction in human relations situations that occur in residence halls, classrooms, business and community situations. Through individual readings and group participation, students learn to understand and use group dynamics principles in areas of personal and professional interaction.

International and Comparative Education

420 Comparative Cultures and Education (4)

Prereq: perm. (fall, spring) *S. Samaan*. Emphasis on distinctive cultural, economic and political forces which shape patterns, problems and roles of education in some selected developed and developing nations. These include United States, some European countries and at least one African and/or Asiatic nation where a former or present Western culture has an impact. Assessment of this impact especially on educational developments.

425A Education and Development in Africa (4)

Prereq: perm. (winter) *S. Samaan*. Interdisciplinary course focusing on tradition and change in African societies, problems of political independence, economic development, cultural values in transition, tribalism and nationalism and role of Africa in world peace and international cooperation. Tradition and change in African education, landmarks in African educational developments and role of education in economic and technological development. Issues and problems in African education.

425B Education and Development in Asia (4)

Prereq: perm. Same emphasis as 425A on tradition and change in society, culture and education, and role of education in national development and international understanding; discussion of pertinent educational issues and problems.

425C Education and Development in Latin America (4)

Prereq: perm. Same emphasis as 425A-425B, on tradition and change in society, culture and education and role of education in national development and international understanding; discussion of pertinent educational issues and problems.

432 Perspectives in International Education (4)

Prereq: perm. *S. Samaan*. Interdisciplinary course dealing with concept and issues of international understanding, its psychological, economic and political preconditions; perceptions, values and attitudes that constitute or impede understanding among individuals, groups, races and nations; human and cultural dimensions in technical assistance programs and in international relations; role of education in attitude change and formation relative to international understanding and development.

Professional Laboratory Experiences

360 Field Experience in Elementary or Secondary Schools (2)

Prereq: jr rank, perm. (fall) *J. Evans*. Observation and participation for period of 2 wks at opening of school yr in September. Orientation meetings for this program are conducted by the Student Teaching Office during first wk of May each yr. Administrative approval of selected school system is required.

361 Field Service in Education (2)

Prereq: soph rank. (fall) *J. Evans*. Participation in community agencies, summer camps, recreation programs, Head Start and various school related programs other than September program (EdPL 360):

460 Observation and Participation in Elementary or Secondary Schools (3)

Prereq: perm. *J. Evans, J. Rodgers*. Extensive participation in school program extending over period of 1 qtr, designed primarily for students with some classroom teaching experience, especially students from other countries.

461 Student Teaching in Elementary Schools (6)

Prereq: perm. *J. Evans, staff*. Assigned responsibility for teaching under supervision of a master teacher in a classroom in K-6 range for 1 qtr, full-time. Concurrent registration in 461, 462 and 465 is required of all elementary education and speech therapy majors. Concurrent registration in 461, 463 and 465 is required of majors in art, music and physical education.

462 Student Teaching in Elementary Schools (6)

Prereq: 461. Continuation of 461. See 461 for description.

463 Student Teaching in Secondary Schools (6)

Prereq: perm. *J. Evans, staff*. Assigned responsibility for teaching under supervision of a master teacher in a classroom in 7-12 range for 1 qtr, full-time. Concurrent registration in 463-464-465 is required of all majors in secondary academic areas, home economics and industrial arts. Majors in art, music and physical education must register concurrently for 461, 463 and 465.

464 Student Teaching in Secondary Schools (6)

Prereq: 463. Continuation of 463. See 463 for description.

465 Student Teaching Seminar (3)

J. Evans, J. Rodgers, A. Eisen, staff. Analysis and interpretation of student teaching experience. Problem-centered discussion of major areas of concern directly related to classroom teaching. Structured discussion of unit and lesson planning, evaluation, classroom management, pupil adjustment, effects of recent legislation upon classroom teacher, position procurement, professional ethics, and professional organizations. Concurrent enrollment for 12 qtr hrs credit in student teaching is required.

466 Student Teaching for Advanced Students (6-9, max 9)

Prereq: perm. (1st summer term) *J. Evans, staff*. Seminar with observation, participation, and limited opportunities for teaching; open only to elementary education degree candidates with prior teaching experience and selected secondary education majors.

Secondary Education

250 Analysis of Teaching (4)

Prereq: admission to teacher education or perm of education personnel dean. Immediate focus upon teaching act with training in its systematic observation and analysis. Peer teaching, laboratory use of instructional media, and tools for self-analysis. 3 lec, 2 lab.

331 Educational Research Techniques and Writing (3)

(winter) Concentration upon communication skills of reading, writing, and speaking; utilizing educational writings dealing with history of education, philosophy, psychology, sociology, and current issues. Development of critical reading, effective writing and speaking skills.

351 Instructional Process and Curriculum (5)

Prereq: 250 and admission to jr standing in teacher education, or perm of education personnel dean. Focus on current teaching techniques and materials. Continued emphasis on lab experiences and use of media. 4 lec, 2 lab.

361 Instructional Process and Curriculum (5)

Prereq: 250 and admission to jr standing in teacher education or perm of education personnel dean. Same as 351. Recommended for majors in music, art, physical education and speech therapy.

H399 Honors Course (3-5, max 15)

Prereq: student teaching or perm. (winter) Seminar for honors students and students seeking honors in secondary education. Involves individual and group study in depth with opportunities for limited field investigations.

420 Teaching Reading in the Junior and Senior High School (5)

Prereq: 9 hrs and educational psychology. (spring) *D. Leighty*. Materials, methods and developmental patterns of adolescents in reading. Remedial programs and adaptation of materials to adolescent.

432 Evaluating Pupil Progress in Secondary Schools (3)

(spring) *J. Thompson*. Test construction, teacher-made tests, standardized tests and instructional objectives of testing. Test evaluation, score interpretation and relation of tests to student development.

470 Teaching of Bookkeeping and Basic Business (3)

Prereq: 351 and Acct 303. (fall) Materials, methods, and techniques in teaching bookkeeping and basic business subjects.

471 Teaching Mathematics in Middle and Junior High School (3)

(spring) Organization and methods of teaching subject matter of mathematics curriculum in grades 7 and 8. Number system studied.

472 Teaching of Earth Science (3)

Prereq: 351. (winter) *R. Skinner*. Instructional materials and techniques related to teaching earth science.

478 Teaching of Physical Science (3)

Prereq: 351 and perm. (spring) *R. Mitias*. Instructional materials, classroom methods, sources of lab equipment and supplies and teaching techniques in physical sciences.

479 Teaching of the Social Studies in Junior and Senior High Schools (3)

Prereq: 351 and perm. *A. Clubok*. Nature, development, purpose, and value of social studies, with emphasis on methods and techniques of instruction. Curriculum reorganization, unit planning, materials of instruction, and evaluation.

480 School and Society (3)

Prereq: student teaching or perm. Current trends and issues in American secondary education, utilizing materials drawn from social and cultural foundations of education.

490 Studies in Secondary Education (1-15, max 15)

Prereq: perm. *R. Boyd*. Serves a special projects function as defined by chairman of department. Honors students or students seeking honors in secondary education may register for this course.

Special Education

271 Introduction to Education of Exceptional Children and Youth (3)

Prereq: admission to teacher education. Educational needs of exceptional children in-

cluding gifted, slow learner, trainable and educable mentally retarded, non-sensory neurologically impaired, speech handicapped, aurally and visually impaired and socially and emotionally maladjusted.

272 Introduction to Education of Mentally Retarded Children and Youth (3)

Prereq: 271 and admission to teacher education. *D. Peterson*. Etiology, diagnosis, classification, learning potential and general characteristics of retarded child with emphasis on psycho-sociological impact of retardation upon individual, his family and community.

371 Teaching the Preschool Handicapped (3)

Prereq: admission to jr. standing in teacher education. Purpose, organization and methods utilized for education of preschool handicapped including program of home training.

372 Language Development for the Handicapped (3)

Prereq: admission to jr standing in teacher education. Normal language development versus delayed language acquisition and speech impairments common among mentally retarded. Methods and materials in evaluation and training of receptive, central and expressive language are presented.

373 Curriculum Development for Handicapped Children (3)

Prereq: 272 and admission to teacher education. Organization and development of curriculum including objectives, concepts, methods and materials with emphasis on preparation of resource units.

374 Language Arts for the Mentally Retarded (4)

Prereq: admission to jr standing in teacher education. Organization methods and materials for teaching receptive and expressive language including listening, speech, reading, writing, spelling and functional composition.

375 Social Studies and Science for the Mentally Retarded (4)

Prereq: admission to jr standing in teacher education. Organization and methods of teaching science and social studies to the mentally retarded with emphasis on unit development.

376 Mathematics for the Mentally Retarded (2)

Prereq: admission to jr standing in teacher education. Organization methodology and materials for teaching basic math concepts and skills which have particular relevance to social and vocational adequacy of mentally retarded children and youth.

377 Vocational Education for the Handicapped (3)

Prereq: admission to jr standing in teacher education. Roles of education, guidance, vocational training, placement and follow-up service in promoting adjustment of handicapped youth to community living.

378 Sheltered Workshop Organization (2)

Prereq: admission to jr standing in teacher education. Organization of sheltered workshop with emphasis on job analysis and contact work.

379 Homemaking and Family Living for the Handicapped (3)

Prereq: admission to jr standing in teacher education. Designed to develop understanding of objectives, organization, methods and materials essential to teaching handicapped child self-care, homemaking and family living skills for his youth and adulthood.

400 Introduction to Emotionally Disturbed Children (3)

Prereq: admission to jr standing in teacher education. Basic understanding of emotional disturbances including causes, characteristics and implications for behavioral and psycho-educational planning.

401 Teaching the Emotionally Disturbed Child (3)

Prereq: admission to jr standing in teacher education. Programs methods and materials used in education of emotionally disturbed child emphasizing a team-developed prescriptive educational and behavioral procedure.

435 Recreation and Physical Education for the Mentally Retarded and Learning Disabled (5)

Prereq: admission to jr standing in teacher education. Preparation for presenting activities and evaluating mentally retarded and learning disabled children and youth in areas of body mechanics, physical fitness, games of low organization, sports, rhythms, stunts, tumbling and recreation activities.

470 Classroom Management with Problem Children (3)

Prereq: admission to jr standing in teacher education. Science of: preventing behavior problems; identifying specific disturbing behavior; learning to use behavior modification techniques in classroom.

474 Diagnosis and Remediation of Specific Learning Disabilities (4)

Prereq: admission to jr standing in teacher education. Techniques of assessing cerebral and perceptual dysfunctions and resultant

cognitive and behavioral disorders with emphasis on neurological bases of sensory motor reaching approach to remediation.

475 Education of the Trainable Retarded (4)

Prereq: admission to jr standing in teacher education. Etiology, diagnosis, classification, learning potential, organization of curriculum and teaching methodology for trainable retarded, including brain-damaged, cerebral palsied and hyperactive children.

476 Teaching the Learning Disabled (4)

Prereq: admission to jr standing in teacher education. Assignment of an individual child for purpose of doing a comprehensive evaluation of and writing a prescriptive program for the child.

477 Problems of Adjustment for the Handicapped (3)

Prereq: admission to jr standing in teacher education. Designed to promote understanding of theory and techniques of working with parents of exceptional children as well as promoting adjustment of child within family and community. Emphasis placed on interpreting conditions of handicap to parents and in helping parents to accept and integrate handicapped child into home and community.

478 Education of the Disadvantaged and Handicapped (3)

Prereq: admission to jr. standing in teacher education. Problems and new approaches to education of disadvantaged children handicapped through intellectual impairment, sensory deficits, perceptual disorders, etc.

490 Study of Special Education (2-15)

Prereq: admission to jr standing in teacher education. Independent analysis of problems, special interests, concerns, with assigned and suggested readings, programmed experiences and preparation of final report, with guidance of staff member.

ENGINEERING, CHEMICAL

200 Introduction to Chemical Engineering (4)

Prereq: Chem 122 or 142, Math 263A. (fall, spring, summer) Applications of chemistry, physics and mathematics to solution of material and energy balances typical of those encountered in process industries. 3 lec, 2 lab.

302 Chemical Engineering Thermodynamics and Kinetics (4)

Prereq: 200, Math 263C. (fall) Application of thermodynamics to chemical engineering problems, including problems in chemical equilibrium for homogeneous and heterogeneous systems, mixtures and pure materials. Applications of chemical kinetics to design of chemical reactor systems. 3 lec.

303 Chemical Engineering Thermodynamics and Kinetics (4)

Prereq: 302. (winter) Continuation of 302. See 302 for description.

304 Chemical Engineering Thermodynamics and Kinetics (3)

Prereq: 303 (spring) Continuation of 302-303. See 302 for description.

331 Principles of Engineering Materials (4)

Prereq: Chem 122 or 142. (fall, winter, spring, summer) Fundamental principles underlying behavior of engineering materials. Relationship between structure and properties of ceramic, metallic and polymeric materials. 4 lec.

342 Unit Operations I (5)

Prereq: 200, Math 263C. (fall) Fundamental principles of fluid flow, heat and mass transfer.

343 Unit Operations II (3)

Prereq: 342. (winter) Continuation of 342. See 342 for description.

344 Unit Operations III (4)

Prereq: 343. (spring) Stagewise processes including distillation and extractions. 3 lec.

400 Applied Chemical Engineering Calculations (3)

Prereq: Math 340. Setting up of ordinary and partial differential equations corresponding to chemical engineering situations and some methods available for their solutions including classical, numerical and computer techniques. 3 lec.

413 Chemical Engineering Lab I—Digital Computers (1)

Prereq: 342. (winter) Lab emphasizing use of digital computers for chemical engineering calculations. 2 lab.

414 Chemical Engineering Lab II—Analog Computers (1)

Prereq: 413. (spring) Lab emphasizing use of analog computers for chemical engineering calculations. 2 lab.

415 Chemical Engineering Lab III (3)

Prereq: 343-344, sr rank. (fall) Lab practice to illustrate principles of selected unit operations, thermodynamics, applied kinetics, and reactor design and to aid student in gaining confidence in handling of pilot plant equipment. Development of ability to devise and conduct chemical engineering experiments with minimum supervision and to report results satisfactorily stressed.

416 Chemical Engineering Lab IV (3)

Prereq: 415. (winter) Continuation of 415. See 415 for description.

417 Chemical Engineering Lab V (2)

Prereq: 415, 442. (spring) Lab course with emphasis on process control and simulation. 4 lab.

**418 Chemical Engineering Lab VI—
Materials (1)**

Prereq: 331. (fall, winter, spring, summer) Demonstrations and experiments supporting relationships which exist between structure and properties of ceramic, metallic, and polymeric materials. 3 lab.

**419 Chemical Engineering Lab VII—
Advanced Materials (1-2)**

Prereq: advanced materials course such as 430, 433, 471 or 474. Individual and small group investigation of advanced problems involving chemical, mechanical, physical or design parameters of materials, materials structure, or fabrication. Investigations may involve ceramics, metal, polymers or composites. 2 lab for each hr of credit.

421 Unit Processes (3)

Prereq: 344, with 344, or perm. (spring) Typical inorganic and organic processes, with emphasis on application of thermodynamic and kinetic theory and on raw material and energy sources, to design and lay-out of these processes. 3 lec.

430 Metallic Corrosion (3)

Prereq: 418. (fall) Basic principles of corrosion including electrochemical foundation, influence of environment, stress, strain and structure. Selected lab experiments. 3 lec.

433 Physical Metallurgy (3)

Prereq: 418. (winter) Mechanisms, kinetics and crystallography of reactions in metallic solids. Selected lab experiments for illustration of principles. 3 lec.

442 Process Control and Simulation (4)

Prereq: 343-344. (fall) Simulation and control of chemical processes. Both feedback and feed forward control are discussed. 3 lec.

443 Chemical Engineering Design (4)

Prereq: 343 and 344, or perm. (winter) Project work involving chemical process design, including evaluation and extension of fundamental data by calculation choice of operating conditions, estimation of costs and selection of equipment. 3 lec each.

444 Chemical Engineering Design (3)

Prereq: 443. (spring) Continuation of 443. See 443 for description.

**452 Introduction to Transport
Phenomena (3)**

Prereq: 343. Heat mass and momentum transfer from a theoretical basis. Presentation of boundary-layer theory and its comparison with other theoretical and semi-theoretical approaches. 3 lec.

471 Introduction to Polymer Properties (3)

Prereq: 331 or perm. Intended to develop thorough understanding of what polymers are and why they possess unique properties. Properties of polymers such as molecular weight averages and distributions, solution properties and thermodynamics, melt order, rubber elasticity and transitional phenomena will be studied and related to ultimate physical and chemical properties. 3 lec.

474 Introduction to Polymer Engineering (3)

Prereq: 343; and 471 or 477; or perm. For students with little or no experience in production and fabrication of polymeric materials. Emphasis on subjects of melt rheology, extrusion and injection molding of polymeric materials.

477 Introduction to Polymer Synthesis (3)

Prereq: 331; and Chem 305 or with Chem 305; or perm. To develop a thorough understanding of mechanisms, kinetics and systems used for synthesis of polymeric materials. Effect of synthesis variations upon properties and reactor design also discussed.

480 Colloquium (1)

Prereq: sr rank. (winter) Lectures, mainly by speakers outside the engineering field, on cultural and professional subjects, with discussion moderated by the speakers. 1 lec.

490 Special Investigations (1-3, max 9)

Prereq: perm. Individual or small-group work, under staff guidance, in research or advanced study in a particular field of chemical engineering.

ENGINEERING, CIVIL

110 Plane Surveying (4)

Prereq: trigonometry. (fall, spring) Basic theory and field practice in measurement of distance, elevation and angle; introduction to photogrammetry. 3 lec, 3 lab.

210 Surveying II (3)

Prereq: 110. (spring) Triangulation; astronomical observations; special topics. 2 lec, 3 lab.

220 Statics (4)

Prereq: Math 263C or with Math 263C. (fall, winter, spring, summer) Laws of equilibrium of forces, friction, centroids and moment of inertia. Not open to srs. 4 lec.

222 Strength of Materials (4)

Prereq: 220, Math 263C or with 263C. (fall, winter, spring, summer) Elementary stresses and strains, torsion; flexure, including elastic curve equations; columns; combined stresses; stresses due to impact. 4 lec.

223 Strength of Materials Laboratory (1)

Prereq: 222 or with 222. Testing of various materials under axial compression, tension, flexure, torsion and impact. Use of electrical and mechanical strain measuring equipment. 2 lab.

311 Route Engineering (4)

Prereq: 110, non majors by perm. Horizontal and vertical curves; geometric design of highways; earthwork distribution; introduction to engineering economy. 4 lec.

321 Dynamics (4)

Prereq: 220, Math 263C. (fall, winter, spring, summer) Motion of particles and rigid bodies, work and energy, impulse and momentum. 4 lec.

330 Structural Theory I (4)

Prereq: 222, CS. (winter) Structural theory, classical and modern methods of analysis including matrix methods with computer applications. 4 lec.

331 Structural Theory II (4)

Prereq: 330. (spring) Continuation of 330. 4 lec.

340 Fluid Mechanics (5)

Prereq: 321. Statics and dynamics of viscous and nonviscous fluids, dimensional analysis and similitude, 1-dimensional gas dynamics, pipe flow, principles of lift and drag, introduction to boundary layers. 5 lec.

341 Fluid Mechanics Laboratory (1)

Prereq: 340 or with 340. Laboratory techniques, calibration principles, fluid and flow measurements. 2 lab.

342 Applied Hydraulics (3)

Prereq: 340. (spring) Flow and pressure distribution in multi-loop networks, dynamics of flow in pumps and turbines, uniform and non-uniform flow in open channels, culvert hydraulics, hydraulic transients. 2 lec, 2 lab.

343 Hydrology (3)

Prereq: 340. (spring) Precipitation and runoff data; groundwater hydraulics; infiltration; peak runoff calculations. 3 lec.

361 Transportation Engineering (4)

Prereq: 311; ISE 405. (spring) Comparative analysis of various modes of transportation, with emphasis on inherent advantages and disadvantages of each; planning process applied to transportation facilities. 4 lec.

370 Soil Engineering (4)

Prereq: 222, Geol 283. (winter) Soil compositions, physical and chemical properties and classifications; water movement and seepage problems; consolidation and shear strength; applications to earth structures, retaining walls, slope stability, bearing capacity and settlement. May be taken as 570 for graduate credit except by civil engineers. 3 lec, 2 lab.

415 Photogrammetry (3)

Prereq: 210 or perm. (winter) Equipment and methods used in aerial photography and land measurement. May be taken for graduate credit as 515. 2 lec, 2 lab.

423 Continuum Mechanics (4)

Prereq: 321, Math 340. (spring) Deformation and flow of continuous media; laws of dynamics and thermodynamics; mechanical properties of fluids and solids; basic theories of continuum mechanics. 4 lec.

424 Strength of Materials II (3)

Prereq: 222. (fall) Theories of failure, unsymmetrical bending, shear center and other topics not covered in usual undergraduate course. 3 lec.

425 Advanced Strength of Materials (4)

Prereq: 222, Math 340. (fall) Advanced treatment of theories of failure, stresses and strains at a point, cross shear, unsymmetrical bending, curved beams, torsion, thick-walled cylinders, energy methods. Graduate-level course open to selected undergraduates. 4 lec.

426 Theory of Stability (3)

Prereq: 222. (winter) Buckling of columns, beam columns, plates and rings. 3 lec.

427 Experimental Stress Analysis (3)

Prereq: 424 or 524 or 525. (spring) Experimental methods of stress determination including photoelasticity, stress coat and electric strain gauge techniques; stress analogies; strain rosettes for combined stress determinations. Graduate-level course open to selected undergraduates. 2 lec, 2 lab.

428 Theory of Elasticity and Applications (3)

Prereq: 222, Math 340 and perm. (fall) Equations of equilibrium and compatibility; stresses and strains in beams, curved members, thick cylinders, torsion and structural members. Graduate-level course open to selected undergraduates. 3 lec.

429 Mathematical Theory of Elasticity (3)

Prereq: 428. Fundamental equations and problems of elasticity theory; methods of stress functions and displacement potentials; applications. Graduate-level course open to selected undergraduates. 3 lec.

432 Structural Design in Concrete (4)

Prereq: 330. (fall) Analysis and design of reinforced concrete members and structures by elastic and ultimate-strength methods, prestressed concrete members. 3 lec, 2 lab.

433 Structural Design in Steel (4)

Prereq: 330. (winter) Design of steel structures and structural components by elastic and plastic methods. 3 lec, 2 lab.

434 Structural Design II (3)

Prereq: 432, 433, 331 or with 331. (spring) Design of complete structures or major components of structures. 2 lec, 2 lab.

435 Advanced Structural Theory I (4)

Prereq: 331. (fall) Analysis of indeterminate structures by both classical and modern methods. Analysis of multistory bents, arches, closed rings and frames with variable cross-sections. Plastic theory and designs. 4 lec.

436 Advanced Structural Theory II (4)

Prereq: 435. (winter) Continuation of 435. Relaxation methods, matrix methods, shell structures. 4 lec.

437 Advanced Structural Design (4)

Prereq: 436. (spring) Modern design concepts and principles as applied to various construction materials. 4 lec.

443 Open Channel Hydraulics (3)

Prereq: 340. (spring) Principles of uniform and varied flow. Channel design for uniform flow, gradually varied flow profiles, channel transition, hydraulic jumps, flow in prismatic and nonprismatic channels. Graduate level course open to selected undergraduates. 3 lec.

446 Potential Flow Theory (3)

Prereq: 340 and/or perm. (fall) Inviscid flow theory. General equations of fluid dynamics, study of potential flow. Graduate-level course open to selected undergraduates. 3 lec.

447 Viscous Flow Theory (3)

Prereq: 340 and/or perm. (winter) Viscous flow theory. Mechanics of fluid resistance, laminar and turbulent flow. Applications to external boundary layer flow and to flow in ducts. Graduate-level course open to selected undergraduates. 3 lec.

450 Water Treatment (3)

Prereq: 342-343. (fall) Sources and collection of public water supplies; principles of treatment processes. 3 lec.

451 Wastewater Treatment (3)

Prereq: 342, 343. (winter) Quantities and collection of municipal wastewater; principles of treatment processes. 3 lec.

452 Water and Wastewater Analysis (3)

Prereq: Chem 123. (spring) Laboratory methods and interpretation of results for chemical and bacteriological examination of water and wastewater. 2 lec, 3 lab.

455 Advanced Water Treatment (4)

Prereq: 450, 452, perm. (fall) Theory; design of treatment units; practice in control methods. 3 lec, 3 lab.

456 Advanced Wastewater Treatment (4)

Prereq: 451, 452, or perm. Theory; design of treatment units; practice in control methods. 3 lec, 3 lab.

462 Traffic Engineering (3)

Prereq: 361, nonmajors by perm. (winter) Vehicle and driver characteristics, uses of traffic control devices, intersection design and capacity, parking characteristics. 3 lec.

463 Traffic Parameters (4)

Prereq: perm. (fall) Vehicle-highway relationships, including vehicle performance and highway geometry. Consideration of highway capacities and their influence on design.

464 Transportation Data Methods (4)

Prereq: perm. (winter) Introduction to traffic survey methods, data collection and evalua-

tion. Topics include origin-destination, speed, parking, accident and future development studies.

465 Traffic Regulations and Controls (4)

Prereq: perm, 463. (spring) Typical traffic ordinances and regulations and their utilization to control traffic through use of signs, markings and control devices. Traffic signals, including their use as single units or as a progressive series.

467 Traffic Studies I (1-4)

Prereq: 464. (spring) Practical problems relating to traffic surveys and data analysis.

468 Traffic Studies II (1-4)

Prereq: 465. (winter) Practical problems relating to vehicular characteristics and traffic movements.

471 Foundation Engineering (3)

Prereq: 370, 432 recommended. (spring) Design and construction problems in soil engineering: subsurface investigation, retaining structures, slope stability, earth dams, foundations and field measurement. 3 lec.

472 Soil Mechanics I (3)

Prereq: 370. (fall) Water movement through soil, construction and interpretation of flow nets. Elastic equilibrium and stress distributions. Consolidation theories and settlement. 3 lec.

473 Soil Mechanics II (3)

Prereq: 472. Shearing strength. Plastic equilibrium, bearing capacity, lateral soil pressures and slope stability. 3 lec.

474 Soil Mechanics Laboratory (1)

Prereq: 472 and 473. (spring) Techniques of soil mechanics measurements. Shear test, pore pressure, volume change. Consolidation, permeability and capillarity; model tests. 3 lab.

475 Advanced Foundation Engineering (3)

Prereq: 472 and 473. (spring) Sub-structure analysis and design to meet various soil conditions. Settlement and bearing capacity analyses of various types of foundations and retaining structures. Case studies. 3 lec.

476 Soil Stabilization (4)

Prereq: 370. (fall) Engineering, geological and pedological soil classification systems. Mineralogy of clay minerals and clay-water systems; requirements for and factors affecting soil stability. Methods and mechanisms of soil stabilization; design and testing stabilized soils. 3 lec, 2 lab.

481 Pavement Design (3)

Prereq: 370. (fall) Types and uses of various paving materials and mixtures; theory and practice in design, construction and maintenance of various types of highway and airport pavements. 2 lec, 2 lab.

482 Bituminous Paving Materials and Mixtures (3)

Prereq: perm. (winter) Types, constituents, chemical behavior, tests, specifications and uses of bituminous materials and aggregates in pavements. Design and manufacture of bituminous paving mixtures and construction of bituminous pavements. 2 lec, 3 lab.

483 Principles of Pavement Design (3)

Prereq: 370. (spring) Fundamentals of wheel loads and stresses in pavements. Properties in pavement components and tests. Design methods and evaluations. 3 lec.

490 Special Investigations (1-5)

Prereq: perm. (fall, winter, spring, summer) Special investigation or problem not covered by formal courses. Permits well-qualified student to pursue individual study under direction of faculty member.

ENGINEERING, ELECTRICAL

210 Circuit Analysis I (3)

Prereq: Math 263C or with Math 263C. (fall, winter) Electric circuit analysis. Circuit elements, Kirchoff's laws, resistive network equations and theorems, I-D equations for circuits with resistance, inductance and capacitance, simple transients. 3 lec.

211 Circuit Analysis II (3)

Prereq: 210 and Math 263C, or with Math 263C. (winter, spring) Continuation of 210. Periodic functions, average and effective values. Fourier series, complex numbers, phasors, impedance function, sinusoidal steady state response, loop and nodal equations, network theorems, power, polyphase circuits. 3 lec.

212 Circuit Analysis III (3)

Prereq: 211 and Math 340, or with Math 340. (fall, spring, summer) Continuation of 211. Exponential excitation, poles and zeroes, Laplace transforms, transients, relation of transient to steady state response, I-D equations and responses for simple mechanical systems, magnetic circuits. 3 lec.

**220 Instrumentation and Computation
Laboratory I (3)**

Prereq: 210 or with 210 or perm. (fall, winter) Theory and applications of laboratory instruments. Laboratory experimentation. Fundamentals of analog and digital computation.

**221 Instrumentation and Computation
Laboratory II (3)**

Prereq: 220, 211 or with 211 or perm. (winter, spring) Theory and applications of laboratory instruments. Laboratory experimentation. Fundamentals of analog and digital computation.

**222 Instrumentation and Computation
Laboratory III (3)**

Prereq: 221, 212 or with 212, Math 340 or perm. (fall, spring, summer) Theory and applications of laboratory instruments. Laboratory experimentation. Fundamentals of analog and digital computation.

**232 Analytical Foundations of Electrical
Engineering (5)**

Prereq: 212 or with 212, Math 340, or perm. (spring, summer, fall) Vector analysis with applications to electromagnetic fields. Matrix theory with applications to state variable formulation of linear and nonlinear systems. Complex variable theory with applications to systems, in preparation for Laplace transforms, Z-transforms, Nyquist criterion, etc. Special analytical techniques for the solution of complex electrical engineering problems with emphasis on computer-oriented techniques.

301 Intermediate Laboratory I (1)

Prereq: 222 or perm. (fall, winter, spring, summer) Intermediate laboratory provides student with opportunity to formulate his own experiments and perform them on an open shop basis. Experiments must receive faculty approval as to content and area of investigation and results presented in written report. This lab sequence must be taken concurrently with required 300-level lecture courses.

302 Intermediate Laboratory II (1)

Prereq: 301. (fall, winter, spring, summer)
See 301 for description.

303 Intermediate Laboratory III (1)

Prereq: 302. (fall, winter, spring, summer)
See 301 for description.

304 Basic Electrical Laboratory I (1)

Prereq: 313, or with 313. (fall, winter, spring, summer) Lab supplement to 313. Basic instruments and circuit measurements. 2 lab.

305 Basic Electrical Laboratory II (1)

Prereq: 304 and 314, or with 314. (fall, winter, spring, summer) Lab supplement to 314. Operation of electronic devices, transformer and rotating machines. 2 lab.

310 Linear Systems and Networks I (3)

Prereq: 212. (fall, winter) Integro-differential equation as model of system, Laplace transform, electrical, mechanical and electro-mechanical systems, transfer functions, block diagrams and flow graphs.

311 Linear Systems and Networks II (3)

Prereq: 310. (winter, spring) Matrix algebra, matrix formulation of nodal and loop systems of equations in the complex frequency domain, network theorems, functions, poles and zeros, natural and forced responses, time domain response and location of poles and zeros, stability, 2-port parameters, frequency response plots, Fourier series and integrals.

312 Linear Systems and Networks III (4)

Prereq: 311. (fall, spring, summer) State variables, properties of driving point functions, 1-port synthesis, image parameters, filters, transmission lines.

313 Basic Electrical Engineering I (3)

Prereq: Math 340, or with 340. D.C., steady-state single phase A.C., balanced polyphase and magnetic circuits. Not open for credit to electrical engineering majors. 3 lec.

314 Basic Electrical Engineering II (3)

Prereq: 313. Electronic devices, models, transformers and steady state performance of rotating machines. Not open for credit to electrical engineering majors. 3 lec.

321 Electromagnetics and Materials I (4)

Prereq: 212, 232. (winter, spring) Introductory treatment of static electric and magnetic fields in free space and stationary matter based on Maxwell's equations and physical properties of fields, charges and currents. Included are: electromagnetic field vectors and field equations, boundary conditions, Poisson's equation, solutions of Laplace's equation for scalar electric and magnetic potentials, vector potential, polarization and magnetization charges and currents and a unified macroscopic treatment of fields in matter. Electromagnetic energy and power.

322 Electromagnetics and Materials II (4)

Prereq: 321. (spring, summer, fall) Continuation of 321. Discussion of time-varying electromagnetic fields. Application of field theory to solution of problems from various branches of electrical engineering with emphasis upon physical interpretation. Included are: relation

of field theory to circuit theory, Poynting's theorem, stored energy and power flow, complex fields and power, TEM waves, transmission line theory, uniform plane wave, wave reflection and refraction, simple wave guides, resonant cavities and dipole radiation.

330 Energy Conversion I (4)

Prereq: 212. (fall, winter) Principles of energy conversion utilizing both electrostatic and electromagnetic forces. Properties of magnetic materials including study of eddy-current and hysteresis effects. Single phase and polyphase transformers theory and applications.

331 Energy Conversion II (4)

Prereq: 330. (winter, spring) Revolving field theory; polyphase induction motors including motor theory and equivalent circuits. Synchronous alternator and motor theory including synchronous condenser applications for power-factor correction.

332 Energy Conversion III (2)

Prereq: 331. (spring, summer) Single phase electromagnetic energy converters. Includes double revolving field theory and its application to shaded pole, split phase and repulsion-induction induction motors, universal motor and single phase synchronous motor.

340 Electronic Circuits I (4)

Prereq: 212. (fall, winter) Fundamentals of electronic circuit analysis and design utilizing diode, FET, BJT and vacuum tube; emphasis on graphical techniques and concepts of small-signal linear circuit models; introduction to internal physics of each device studied.

341 Electronic Circuits II (4)

Prereq: 340. (winter, spring) More elaborate linear amplifier circuits including multistage amplifiers and feedback, frequency characteristics and stability, tuned amplifiers and power amplifiers; emphasis given to design of these circuits; discussion of integrated circuits introduced whenever appropriate.

342 Electronic Circuits III (2)

Prereq: 341. (spring, summer) Continuation of 341, including waveshaping and switching circuits; circuits involving negative-resistance devices including tunnel diode, UJT and SCR introduced.

401 Advanced Laboratory I (1-3)

Prereq: 303 or perm. (fall, winter, spring, summer) Advanced lab format follows that of the intermediate lab. Student-proposed projects are design- or research-oriented and are directed by a faculty member specializing in area of the investigation. Portion of this lab

required in conjunction with certain electrical engineering 400-level lecture courses. Student taking 400-level electrical engineering courses must register for minimum of 1 credit hr of advanced lab per qtr—5 credit hrs of advanced lab required for graduation.

402 Advanced Laboratory II (1-3)

Prereq: 303. (fall, winter, spring, summer) See 401 for description.

403 Advanced Laboratory III (1-3)

Prereq: 303. (fall, winter, spring, summer) See 401 for description.

405 Physical Electronics (3)

Prereq: 322 and 342. (winter) Preparation for subsequent detailed study of solid-state devices, gaseous and quantum-electronic devices, intended to provide suitable depth of background in selected pertinent areas of electrical science.

406 Advanced Electronic Circuits I (3)

Prereq: 342. (fall) Introduction to analysis techniques used in large signal electronic circuits. Analysis and design of signal clippers and clamps, digital logic and field effect devices. Introduction to integrated circuits and their applications in design of computer logic.

407 Advanced Electronic Circuits II (3)

Prereq: 406. (winter) Voltage and current sweep and timing circuits. Switching circuits, multivibrators, voltage comparators, negative resistance switches and oscillators, large signal oscillators.

408 Advanced Electronic Circuits III (3)

Prereq: 407. (spring) Bistable, active and passive memory devices, stabilization of small signal oscillators. Power amplifiers. High frequency electronic amplifiers and parametric devices.

409 Solid-State Instrument Design (3)

Prereq: 342. Electronic instruments and instrument subassemblies including amplifiers, wave form generators, oscilloscopes, TVMs, etc., using various solid-state devices such as diodes, transistors, unijunctions, FETs and integrated circuits.

411 Network Synthesis I (3)

Prereq: 312. (fall) Theory of network design. Positive real functions, synthesis of general passive 1-port, approximation, parts of network functions.

425 Automatic Control I (3)

Prereq: 312. (fall) Formulation of linear models for lumped-parameter physical systems; Z-transform theory; fundamental princi-

ples of closed-loop discrete and continuous control; signal flow graph representation of discrete and continuous system equations; Routh-Hurwitz and Jury stability criteria; time domain performance specifications.

426 Automatic Control II (3)

Prereq: 425. (winter) Root locus; cascade and feedback compensation; Nyquist stability criterion; Bode plots and Nichols charts; frequency domain performance specifications; plant identification; minimal prototype design; analog and digital computer-aided design of discrete and continuous control systems.

427 Automatic Control III (3)

Prereq: 426. (spring) State variable theory for discrete and continuous systems; controllability and observability; integral performance criteria; basic optimal control theory.

430 Theory of Measurements (3)

Prereq: 312. Dynamics of D.C. instruments, dynamics of A.C. instruments, null measurement techniques, statistical errors, mechanical and magnetic measurements.

440 Microwave Theory and Devices (3)

Prereq: 322 or equiv. (fall) Generation and transmission of electromagnetic energy above 30 MHz. Discussion of klystrons, magnetrons, solid-state sources, waveguides and resonators including lab demonstrations and experiments.

441 Antennas (3)

Prereq: 322 or equiv. (winter) Theory of radiating structures, analysis and synthesis of arrays, impedance, radiation patterns, gains and discussion of selected practical examples.

442 Introduction to Radar and Aircraft Navigation Systems (3)

Prereq: 322 or perm. (spring) Microwave radar as applied to aviation requirements of surveillance, approach and landing, weather avoidance, discussion of VOR, DME, RNAV, ILS, ADF, Loran, Omega.

443 Electromagnetics I (3)

Prereq: 322, Math 340. (fall) Review and development of mathematics required for more advanced study of electrodynamics, including coordinate transformations, cartesian vectors and tensors, invariance properties of vector operations, vector operations in general orthogonal coordinates and complex vector fields. Application of complex vector field to oblique reflection of plane waves from general linear media. Fundamentals of radiation, including calculation of fields generated by arbitrarily time varying distributions of current.

450 Control of Electrical Machinery (3)

Prereq: 332. Magnetic and electronic motor controllers including study of control theory and application to given problems.

451 Symmetrical Components (3)

Prereq: 331. (winter) Circuits analysis by symmetrical components, representation of unbalanced polyphase currents and voltages by component symmetrical sets, solutions of faults on power systems, unbalanced operation of power equipment, single phase induction motor analysis.

452 Power Transmission (3)

Prereq: 332. (fall) Economic and electrical principles of electrical power lines, mechanical principles of transmission line design.

453 Power Distribution (3)

Prereq: 451. (spring) Fault current calculations and automatic fault isolation on a co-ordinated distribution system, study of relays, reclosers, sectionalizers and fuse coordination, load and voltage studies of distribution, radial and network systems.

454 Electrical Design (3)

Prereq: 332. Design relationship of electrical machinery, including design of machine and predetermining of its performance.

458 Power System Stability Studies (3)

Prereq: 332. (spring) Problems pertaining to stability of large power systems, both synchronous and asynchronous loadings, maximum use of digital computer techniques and matrix algebra. Each student will present paper on individually assigned problems.

460 Analog and Digital Computer Methods (3)

Prereq: facility with FORTRAN IV. (fall, spring) Introduction to analog and digital computer-aided analysis and design. Examples and application drawn from wide range of topics such as control systems, transportation systems, economic systems, biological systems, etc.

461 Combination Circuits (3)

Prereq: 341. (fall) Postulates and fundamental theorems of Boolean algebra, map and algebraic methods for design of combinational logic circuits using contact or electronic devices and minimization techniques.

462 Sequential Circuits (3)

Prereq: 461. (winter) Basic ideas from theory of finite-state machines, synthesis of sequential circuits using contact or electronic devices, study of state assignment, synchro-

nous and asynchronous circuits, race conditions, etc.

463 Digital Computer Design (3)

Prereq: 462. (spring) Functional organization of digital computers for control and data processing, definition of functional characteristics of subsystems, study of current computer component technology. Several types of machines designed in varying degrees of detail.

468 Communication Engineering (3)

Prereq: 342. (winter) Unified approach to communications stressing principles common to all transmission systems. Review of Fourier series. Fourier integral and complex frequency techniques with emphasis on communication networks, time response and convolution, measurement of information, amplitude modulation (double and single sideband techniques), frequency modulation, sampling theory, pulse modulation systems, fundamentals of random signal theory and its application to communication systems, noise and its effect on conventional modulation systems; noise figure, noise suppression techniques and other related topics.

469 Statistical Analysis (3)

Prereq: 312. (fall) Analysis of engineering problems using probabilistic and statistical concepts: probability, discrete and continuous random variables, distribution functions, means, moments, characteristic functions, statistical independence, correlation, estimation, stochastic processes and applications to engineering problems.

488 Analysis of Engineering Problems (3)

Prereq: perm. Basic philosophy, methodology and viewpoint developed for solution determination. Comparison made for applicability of empirical and theoretical analytical techniques to both linear and nonlinear situations. Characterization via mathematical models utilized for problem synthesis. Trade-off studies as practical technique for parameter value selection and influence-effect relationships.

490A Space Communications (3)

Prereq: 303, 312, 322, 342 or perm. (summer) Communications links with examples taken from space applications. Includes considerations of data encoding, modulation technique, antenna gains, space loss, system noise and demodulation techniques.

490B Foundations of Optimization Theory (3)

Prereq: FORTRAN IV, sr rank. (no regular schedule) Optimization of finite-dimensional non-linear objective functions with constraints. Solution techniques include Newton-Raphson,

geometric programming, steepest descent, conjugate gradient and Davidon's method. Several algorithms are introduced for the solution of problems having closed feasible regions defined by inequality constraints such as penalty function methods and SUMT.

490C Hybrid Computation (3)

Prereq: 460. (winter) Solutions of problems on analog/digital computer systems and on analog computers with programmable logic, organization of hybrid computers, study of factors affecting accuracy of solution.

490D Network Synthesis II (3)

Prereq: 411. Continuation of 411. (winter) Properties of 2 port functions, realization of 2 ports with 2 kinds of elements, insertion-loss synthesis, approximation, filter design.

490E Random Signals in Linear Systems (3)

Prereq: 468, 469. (no regular schedule) Introduction to random electrical signals and noise. Autocorrelation, crosscorrelation, power spectra, N^{th} law detectors, matched filters, detection of signals in noise, optimum receivers, Bayes estimators, digital filtering.

490F Topics in Space Science (3)

Prereq: 469 or Math 450B and 322 or Phys 322. (no regular schedule) Introduction to topics in solar system space science and astrophysics. Remote and direct sensing techniques, instrumentation and data analysis. Specific topics include: large aperture antennas, radiometers, radio wave propagation in atmospheres and ionospheres, thermal and non-thermal radiation mechanisms, elements of data acquisition and processing, parameter estimation and interaction and generation of radio waves in the solar system.

490G Direct Energy Conversion (3)

Prereq: 322 and 341, Phys 253 or 316. (no regular schedule) Brief review of solid state and thermodynamic theories. State of the art study of thermal-electric and thermionic energy converters, fuel cells, solar cells and magnetohydrodynamic generators.

490H Propagation of Radio Waves (3)

Prereq: 321, 322. (no regular schedule) Review of fundamentals of electromagnetic waves, ground wave propagation, surface wave, wave propagation in ferrites, properties of ionosphere and sky wave propagation.

490I Introduction to Plasma Dynamics (3)

Prereq: 321, 322. (no regular schedule) Review of electromagnetic theory, motion of charged particles in given electromagnetic fields. Magnetoionic theory, propagation and excitation of waves in plasma.

ENGINEERING GRAPHICS

101 Engineering Drawing (3)

Beginning course for students of engineering and technology and related fields: basic techniques, processes and standards, multiview drawing, freehand drafting, fundamentals of dimensioning, auxiliary views, section views and sectional assemblies. 5 lec.

102 Engineering Drawing (3)

Prereq: 101. Basic engineering drawing: pictorial drawing, freehand drawing, developments and intersections, dimensioning, working drawings, elementary design problems. 5 lec.

103 The Slide Rule (1)

Prereq: Math 115 or perm. Slide rule computations involving multiplication and division, simple powers and roots, trigonometric functions, vectors, logarithms, fractional powers and roots of numbers. Modern 10" Log Log duplex decitrig slide rule required. 1 lec.

121 Descriptive Geometry (3)

Prereq: 101 or perm. Graphical solutions of problems relating to points, lines, planes and solids. Space visualization pertaining to interactions of planes and solids. Exercise sheets and practical applications. 5 lec.

122 Nomography (2)

Prereq: Math 115 or perm and 101. Fundamentals of using conversion scales, alignment diagrams and proportional charts in graphical solution of equations. 3 lec.

315 Technical Drawing (3)

Prereq: 101, 102, IndT 216 or perm. Standard and basic drawing representations as applied to industrial products and processes with special emphasis on detail and assembly drawing. 6 lec. Replaces EG 115.

ENGINEERING, INDUSTRIAL AND SYSTEMS

231 Introduction to Industrial and Systems Engineering (2)

Prereq: Math 263A. (fall, spring) Overview of history and function of industrial engineering. Criteria, modes of analysis, measures of system performance and organization of engineering functions examined. 2 lec.

333 Work Design I (5)

Prereq: 405 or equiv. (winter) *C. Overby*. Design of work systems and measurement of work. Applications of statistics to data collected from the real world and from laboratory experiments. Models of work systems, schematic models and charting techniques, work sampling, time study, predetermined time systems, standard data and related industrial tools. 3 lec, 4 lab.

350 Engineering and the Technological Society (3)

Prereq: soph or jr rank. (winter) Foundation concepts of engineering, impact and social consequences of engineering on society, technology and human values.

405 Engineering Statistics I (3)

Prereq: Math 263C. (fall, winter, spring, summer) Application of probability and statistics to evaluation of experimental data. Introduction to testing hypotheses, confidence levels and statistical prediction. 3 lec.

406 Engineering Statistics II (3)

Prereq: 405. (winter, spring) Evaluation of numerous probability distribution functions for discrete and continuous random variables as useful experimental engineering tools. Multiple linear and nonlinear regression models for experimental systems. Study of variances and means of characteristic system factors and their significance in model definition. 3 lec.

407 Engineering Statistics III (3)

Prereq: 405. (spring) Design and analysis of engineering experiments approached from linear statistical model point of view. Blocking designs, full and fractional factorial designs, analysis of variance and introduction to response surface methodology. 3 lec.

415 Introduction to Systems Engineering (2)

Prereq: perm. *E. Gamble*. Summary of systems engineering techniques. Beginning course for systems engineers; survey course for others. 2 lec.

420 Analysis of Engineering Situations I (3)

Prereq: Math 263C, Math 113A or perm. (winter) *E. Gamble*. Basic philosophy, methodology and viewpoint for definition and solution of engineering problems. Effects of bounding conditions and role of judgment included. 3 lec.

421 Analysis of Engineering Situations II (3)

Prereq: 420. (spring) Continuation of 420. See 420 for description.

424 Non-Linear Analytical Techniques (3)

Prereq: 420, 421 or perm. *E. Gamble*. Non-linear phenomena and classification of singularities. Role of forcing function. Solutions found through methods of residues and variation of parameters. Applications to adaptive controlled systems and optimal controlled systems, and other organized structures. 3 lec.

425 Statistical Design and Analysis of Controlled Systems (4)

Prereq: 405. *E. Gamble*. Applied statistical techniques in selective design and evaluation of physical and non-physical systems. Tolerances, errors and variations in parameters of systems viewed in terms of probabilistic distributions and effects in output parameters. Value standards such as reliability and maintainability of equipment and man-machine systems treated statistically. 3 lec, 2 lab.

427 Digital Computer Systems I (3)

Prereq: sr rank in engineering or science or perm. (fall) Overview of digital computer systems. Programming, storage organization and search. Number representations, conversions and elementary arithmetic operations. Addressing and instruction sequencing. Multiprogramming, multiprocessing and real-time systems.

428 Digital Computer Systems II (3)

Prereq: 427 or perm. (winter) Continuation of 427. See 427 for description.

430 Engineering Economy (3)

(fall, spring) Economic analysis of engineering projects. Topics include time value of money, cost estimation, equipment comparison, breakeven analysis, economic lot size and replacement analysis. 3 lec.

431 Advanced Engineering Economy (3)

Prereq: 430, 405. (winter) Continuation of 430. Element of risk explicitly treated by consideration of uncertainties of cost estimates, forecasting and other economic variables. Emphasis placed on construction and use of mathematical models for analysis of engineering alternatives. 3 lec.

432 Inventory and Manufacturing Control I (3)

Prereq: 405, FORTRAN. (fall, winter) *D. Scheck*. Design of inventory and manufacturing control systems. Forecasting, continuous

and periodic review inventory systems. Relationship between production schedules and inventory. Production scheduling systems; sequencing models; dispatching rules. 3 lec.

433 Industrial Computer Applications (3)

Prereq: 405, FORTRAN. (fall, spring) Simulation of industrial problems utilizing digital computers and data processing equipment. Stresses user-oriented programs and advanced format techniques. Applications include use of library routines. 2 lec, 2 lab.

434 Network Analysis (3)

Prereq: 405. (fall, spring) Engineering project-planning using such techniques as PERT and critical-path method. 3 lec.

435 Quality Control and Reliability (3)

Prereq: 405. (fall, spring) Industrial techniques for process control, acceptance sampling by attributes and variables, inspection and test methods, operating characteristics and design of sampling plans. 3 lec.

439 Information Systems Engineering (3)

Prereq: 405, 433 or equiv. (spring) Design of industrial information systems. Storage, retrieval and transmission by automatic data processing equipment is considered.

440 Industrial Plant Design (3)

Prereq: 333, 430, FORTRAN. (fall, winter) *D. Scheck*. Design process for manufacturing systems. Process planning, equipment selection, jig and fixture design, plant capacity analysis, production scheduling, inventory control, line balancing, plant layout. 2 lec, 2 lab.

441 Introduction to Operations Research (3)

Prereq: 405, 430, FORTRAN. (winter, spring) Basic methodology of operations research in solution of industrial, engineering and other problems. Emphasis on applications and mathematical structure of such topics as inventory models, queuing theory, sequencing and linear programming. 3 lec.

442 Inventory and Manufacturing Control II (3)

Prereq: 432 or perm, FORTRAN. (spring) *D. Scheck*. Branch and bound scheduling algorithms, horizon planning, control of integrated production, inventory and workforce systems, linear decision rules. 3 lec.

443 Work Design II (3)

Prereq: perm. (spring) Exploration of interaction between industrial and systems engineering and labor as an institution. Arbitration, technological change and work organization. 3 lec.

444 Applications of Mathematical Programming (3)

Prereq: perm. (spring) Linear systems techniques for optimum solution of industrial, engineering and other problems. Topics include assignment problem, transportation problem, simplex method, approximate methods, dual problem, sensitivity analysis. 3 lec.

445 Systems Design (3)

Prereq: 440. Individual or small-group system design project.

447 Elements of Behavior Systems Engineering (3)

Prereq: perm. (fall) *J. Fink*. Elements of behavior systems analysis, prediction, design and control. Properties of stimulus-response reflex as behavior system input-output function examined. 3 lec.

448 Man-Machine Systems (3)

Prereq: perm. (fall, winter) *J. Fink, C. Overby*. Role of human operator as subsystem in complex man-machine system. Optimum design principles for information displays, equipment controls, work-place environments and life-support systems are examined. 3 lec.

449 Behavior Systems Management in Engineering Industry (3)

Prereq: perm. (winter) *J. Fink*. Applies principles of behavior systems engineering to problems of engineering management. Behavior systems analysis of engineering organization structure and function with respect to problems of prediction, design and control of engineering outputs. 3 lec.

480 Colloquium (1)

Prereq: sr rank. (winter) Series of lectures mainly by speakers outside engineering field, on cultural and professional subjects, with discussion moderated by speaker.

489 Special Investigations (1-6)

Prereq: perm.

490 Advanced Problems in Computer Applications (1-6)

Prereq: perm. Special investigations of advanced industrial and systems engineering problems involving use of digital or analog computers.

and parallels that in the other engineering curricula. The work of the last two years is comprehensive. It includes courses in the theory and design of machines and mechanical equipment, systems analysis and control and in thermodynamics and its applications. To give a well-rounded curriculum, work is included in other fields of engineering, such as fluid mechanics and electrical engineering. Specialization is provided for by elective courses.

301 Dynamics of Machinery (5)

Prereq: CE 321. (winter) Kinematic analysis and design of mechanisms, and mechanical trains. Force and energy analysis in machines. Critical speeds and engine balancing.

313 Metal Processing (3)

Prereq: IndT 117, CE 220. (fall, spring) Structure of metals, mechanics of metal cutting. Friction, lubrication and wear, cutting fluids, unconventional methods of machining, economics.

321 Introduction to Thermodynamics (4)

Prereq: Phys 251. Basic engineering thermodynamics. Definitions, first law, properties and property relations, second law, availability, applications to engineering problems.

322 Introduction to Thermodynamics Lab (1)

Prereq: 321 or with 321. Instruments and measurements, applications to simple thermal machines. Comparison of measurements with theory, elementary computer simulations. Report writing.

327 Steam Power Plants (3)

Prereq: 321 or with 321; Math 263A, B. (fall) Fuels, principles of combustion, stationary boilers, grates, stokers, furnaces, coal pulverizers, economizers, pre-heaters, superheaters, stacks, forced and induced draft, boiler-feed pumps, steam engines and turbines, and condensers. 3 lec.

328 Applied Thermodynamics (5)

Prereq: 321. (spring) Non-reactive and reactive mixtures, compressors, analytical studies of gas and vapor power cycles, and refrigeration. 5 lec.

330 Applied Thermodynamics Lab (2)

Prereq: 322. (winter, spring) Sr lab course involving more complex experiments on steam turbines, boilers, combustion, pumps, air compressors, heat transfer and refrigeration. Two 2-hr sessions per wk.

401 System Analysis and Control (4)

Prereq: Math 340. (fall, spring) Physical modeling, formulations and responses of me-

ENGINEERING, MECHANICAL

Mechanical engineering emphasizes machine design and thermal engineering. The work of the first two years is general and fundamental

chanical, electrical, hydraulic and thermal dynamic systems. Fundamental theory of automatic controls and applications.

402 Fluid Mechanisms and Controls (3)

Prereq: 401. Fluid mechanics associated with fluid control, survey of flow control devices, fluid amplifier principles, digital logic, analysis and synthesis of fluid control systems.

403 Machine Design I (4)

Prereq: 301, ChE 331, CE 222 and 223. Applications of mechanics, mechanisms, materials and mechanical processes to design and selection of machine members and units of power transmission. Emphasis on design based on failure criteria rather than analysis, and with consideration for production processes and economics.

404 Machine Design II (5)

Prereq: 403. (spring) Application of logical methods and approaches used to define engineering problems and design procedures for obtaining solutions in areas such as engineering materials (including residual stresses), design of machine elements, dynamics, vibrations, fluid dynamics and thermodynamics. Emphasis on inventiveness, engineering analysis and decision making. 5 lec.

407 Fundamentals of Nuclear Engineering (4)

Prereq: perm. (spring) Nuclear engineering, including nuclear reactions, radiation detection and measurement, reactor criticality, principles of reactor control, radiation shielding, effects of radiation on materials, uses of radioactive materials.

411 Cryogenic and Vacuum Fundamentals (4)

Prereq: 321, 412. (arranged) Production of low temperatures and pressures, molecular transport, diffusion through solids, radiation heat transfer, high-performance insulators, low-temperature heat transfer, 2-phase flow, superconductivity.

412 Heat Transfer (5)

Prereq: 321, CE 340. (fall, winter) Basic concepts of conduction in 1 or more dimensions, steady and transient modes. Radiation, fundamentals of convection in various modes, heat exchanger design. 5 lec.

417 Design of Thermal Systems (4)

Prereq: 321, 328, 412. (arranged) Design of systems in which thermodynamics and heat and mass transfer are major considerations. Emphasis on total design approach including factors such as cost and reliability. Typical systems include power, propulsion, environmental, cryogenic.

418 Mechanical Engineering Experimentation (1)

Prereq: ME sr or grad rank. Instruction in experimental procedure and experience in designing and executing laboratory experiments. Students plan and execute their own experiments to acquire answers to assigned problems. Variety of areas covered including control systems, energy conversion, fluid flow, heat transfer, motion measurements, stress-strain. Instructional guidance provided by entire mechanical engineering staff. Provides familiarity with variety of instrumentation and procedures. Three-quarter sequence with experimental subjects phased with prerequisites.

419 Mechanical Engineering Experimentation (1)

Prereq: ME sr or grad rank. Continuation of 418. See 418 for description.

420 Mechanical Engineering Experimentation (1)

Prereq: ME sr or grad rank. Continuation of 419. See 418 for description.

424 Gas Dynamics I (3)

Prereq: CE 340 or perm. (winter) 1 and 2 dimensional compressible flow-isentropic flow, flow with heat transfer, friction, shocks, generalized 1-dimensional flow. Applications to propulsion systems. 3 lec.

425 Vehicle Propulsion Systems (4)

Prereq: 424. (arranged) Applications of basic engineering disciplines to design and analysis of air and ground vehicles. Extensive use of digital computers. Term report required.

440 Coupled Thermal/Electrical Behavior and Devices (4)

Prereq: 321, 412, Phys 316. (arranged) Coupled flows, irreversible thermodynamics, behavior of ionized gases, general principles of unconventional thermodynamic cycles, thermo-electricity, thermionics, MHD, fuel cells.

480 Colloquium (1)

Prereq: sr rank. (winter) *P. Black*. Series of lectures, mainly by speakers outside the engineering field, on cultural and professional subjects, with discussion moderated by speaker.

484 Problems in Thermal Machinery (3)

Prereq: perm, good academic record. (arranged) Research in thermal machines. Individual work on experimental or analytical project involving current problems. Training in use of library, theory and use of instruments, error analysis, planning of experi-

ments, effective report writing. Students should elect 2-term sequence to allow adequate time for completion of meaningful project. Report required.

485 Problems in Thermal Machinery (3)

Prereq: perm. Continuation of 484. See 484 for description.

486 Problems in Thermal Machinery (3)

Prereq: perm. Continuation of 484-485. See 484 for description.

489 Special Investigations (1-6)

Prereq: perm.

491 Mechanical Vibrations I (3)

Prereq: Math 340, CE 321. (fall, spring) Characteristic phenomena of mechanical vibrations encountered in machines and structures (of 1-degree of freedom) in their quantitative investigation. Simple harmonic motion; free, transient and forced vibrations; application of phase-plane methods; damping effects; mobility method; analog computation. 2 lec, 2 lab.

492 Mechanical Vibrations II (4)

Prereq: 491. (winter) Application of matrix methods; 2-degree of freedom systems; lumped mass systems with several degrees of freedom, and methods for normal mode determination. 4 lec.

493 Lubrication and Bearing Analysis (3)

Prereq: perm. (arranged) Concepts of boundary, hydrostatic and hydrodynamic lubrication. McKee, and Boyd and Raimondi, methods. Solid lubrication, porous bearings, gas bearings and lubrication in living and artificial human joints.

494 Advanced Machine Design (3)

Prereq: perm. (arranged) Advanced considerations in design and analysis of machine members, including residual stresses and fatigue in metals, stress propagation and creep. 3 lec.

495 Introduction to Kinetic Theory and Statistical Thermodynamics (4)

Prereq: perm. (fall). Kinetic theory, classical and quantum statistical mechanics with application to engineering devices. 3 lec.

496 Experimental Methods in Design (3)

Prereq: 403. (arranged) Investigation and evaluation of experimental methods that may be used to obtain design and performance data. Techniques of photoelasticity, strain measurements and vibration measurement.

497 Methods of Engineering Analysis I (4)

Prereq: Math 340 or perm. (arranged) Methods of analyzing equilibrium and eigenvalue

problems in mechanical engineering and engineering mechanics; matrix methods, variational methods, numerical methods.

ENGLISH

English Language and Literature Humanities

The major requirement for the AB degree consists of a minimum of 45 hours, including the following: a) 301 or 302 or 303, b) 307 or 351 or 352, c) 311 or 312, d) 313 or 314, e) 321 or 322, and f) one 400-level course. Completion of these courses automatically completes the Arts and Sciences College requirement of 9 hours in the major at the junior-senior level.

Students wishing to major in creative writing will take a maximum of 20 hours of creative writing, 10 hours of which will be *in addition* to the regular requirements for the English major. At the discretion of the director, a student may substitute five hours of 308, Advanced Composition, for five hours of creative writing.

Honors work in English: see "Departmental Honors" under Honors College. For general English requirements, see page 91.

English Language and Literature

160 English for Foreign Students (5)

Prereq: non-native speakers of English only, perm (adequate proficiency). Principles and practice of close reading and writing of non-literary prose. Student reads examples of description, exposition and argumentation. Reading practice focuses on developing skill in recognition of features of form and style characteristic of these types of written English necessary for satisfactory comprehension. Writing practice progresses from paragraph length composition to longer essays. Emphasis on mastery of principles of organization and development of ideas and expression in acceptable English idiom and style.

177 Literary Themes (5)

Prereq: fr and soph only. Universal themes in fiction, poetry and drama of all ages. Guidance in critical thinking, reading and writing about those themes and works in which they find expression.

178 Literary Themes (5)

See 177 for description.

English

179 Literary Themes (5)

See 177 for description.

187 Contemporary Issues (5)

Prereq: fr and soph only. Modern themes and problems which find expression in literature and thought of 20th century. Guidance in critical thinking, reading and writing about those themes and problems.

188 Contemporary Issues (5)

See 187 for description.

189 Contemporary Issues (5)

See 187 for description.

H197 Freshman Honors Seminar (5)

Prereq: admission to Honors College. Literature and writing—introduction in continuing discourse about literature and nature of its relevance to man.

H198 Freshman Honors Seminar (5)

Prereq: H197. Continuation of H197. See H197 for description.

H199 Freshman Honors Seminar (5)

Prereq: H198. Continuation of H197-H198. See H197 for description.

201 Interpretation of Fiction (5)

Prereq: 5 hrs above 100. Forms and techniques of art of fiction.

202 Interpretation of Poetry (5)

Prereq: 5 hrs above 100. Intensive reading of selected poems from all periods of English and American literature and study of forms and techniques.

203 Interpretation of Drama (5)

Prereq: 5 hrs above 100. Analysis of dramatic forms.

204 Introduction to Comparative Literature I: The Classical Tradition (5)

Prereq: 5 hrs above 199. Selected classical texts, sometimes alone and sometimes in conjunction with modern texts, for purpose of defining classical sensibility in Western literature.

205 Introduction to Comparative Literature II: Romantic Tradition (5)

Prereq: 5 hrs above 199. Will deal with esthetic and philosophical concepts that have formed Romantic Tradition in Western literature. Concentration on works by German, English and French writers.

206 Introduction to Comparative Literature III: The Modern Tradition (5)

Prereq: 5 hrs above 199. Selected literary works which provide background for and express modern sensibility in Western literature.

H297 Honors Studies in Fiction (5)

Prereq: admission to Honors College. Forms and techniques of art of fiction. Honors College parallel to 201, Interpretation of Fiction.

H298 Honors Studies in Poetry (5)

Prereq: admission to Honors College. Intensive study of selected poems from all periods of English and American literature and study of forms and techniques. Honors College parallel to 202, Interpretation of Poetry.

H299 Honors Studies in Drama (5)

Prereq: admission to Honors College. Intensive study of nature of drama, analysis of dramatic forms. Honors College parallel to 203, Interpretation of Drama.

301 Shakespeare, The Histories (5)

Prereq: 5 hrs above 199. (fall) History plays.

302 Shakespeare, The Comedies (5)

Prereq: 5 hrs above 199. (winter) Comedies.

303 Shakespeare, The Tragedies (5)

Prereq: 5 hrs above 199. (spring) Principal tragedies.

301A Shakespeare, Selected Plays and Poems (3)

Prereq: 5 hrs above 199. Selected tragedies, histories and comedies together with related poems. Examination of themes, characters and language. Recommended for non-majors. Not duplicated by 301.

302A Shakespeare: Selected Plays and Poems (3)

Prereq: 5 hrs above 199. Continuation of 301A. See 301A for description. Not duplicated by 302.

303A Shakespeare: Selected Plays and Poems (3)

Prereq: 5 hrs above 199. Continuation of 301A and 302A. See 301A for description. Not duplicated by 303.

304 English Bible (5)

Prereq: 5 hrs above 100. Selected prose and poetry of Old and New Testaments.

306A Studies in Oriental Literature (5)

(fall) Introduction to cultural background of Oriental literature.

306B Studies in Oriental Literature (5)

Prereq: 306A. (winter) Continuation of 306A. Study of classical Oriental literature.

306C Studies in Oriental Literature (5)

Prereq: 306B. (spring) Continuation of 306A-B. Study of modern Oriental literature.

307 The Structure of American English (5)

Prereq: 10 hrs above 199. Sound structure and grammatical structure of American English in light of contemporary linguistic theory.

308 Advanced Composition (5)

Prereq: jr rank. Past and present forms of essay; practice in a variety of non-fiction prose techniques; stress on development of a mature prose style.

309 Creative Writing (5)

Prereq: 201 or 202 or 203. Beginning course in creative writing. Will concentrate on processes of invention as they lead to works of fiction and poetry. Student manuscripts criticized; creative literary works of recognized importance analyzed; act of writing a continuing practice.

310 McGuffey Lectureship in Literature (1-5)

Prereq: 5 hrs. Special series of lectures offered by current McGuffey Visiting Professor of English. Subject announced each qtr. Number of lectures offered determines credit hrs assigned.

311 Early English Literature (5)

Prereq: 10 hrs above 199. Major works and genres of Old and Middle English literature including Chaucer.

312 Renaissance Literature (5)

Prereq: 10 hrs above 199. Major works, writers and genres of the English Renaissance, excluding Shakespeare.

313 Restoration and Neo-Classical Literature (5)

Prereq: 10 hrs above 199. Major works, writers and genres of Restoration and neo-classical period.

314 Romantic and Victorian Literature (5)

Prereq: 10 hrs above 199. Major works, writers and genres of Romantic and Victorian periods.

315 American Literature (3)

Themes in American literature of 19th and 20th centuries especially relevant to the non-major. Not duplicated by other American literature courses.

316 English and Continental Literature (3)

Themes in English and European literature especially relevant to the non-major. Not duplicated by other English literature courses.

317A American Literature by Black Authors (5)

Body of literature being written by black authors in America and attempts to assess the quality and significance of this cultural contribution. (a) Emphasizes "background" materials, fiction and autobiography of 19th and 20th centuries; (b) emphasizes poetry, but includes further reading in recent fiction and non-fiction prose; (c) emphasizes drama, continues study of new trends in poetry.

317B American Literature by Black Authors (5)

Continuation of 317A. See 317A for description.

317C American Literature by Black Authors (5)

Continuation of 317A,B. See 317A for description.

321 American Literature to the Civil War (5)

Prereq: 10 hrs above 199. Major works, writers and genres of American literature before the Civil War.

322 American Literature Since the Civil War (5)

Prereq: 10 hrs above 199. Major works, writers and genres of American literature since the Civil War.

331 20th Century British and American Literature (5)

Prereq: 10 hrs above 199. Some major works, writers and genres of British and American literature in this century.

341 Themes in Comparative Literature (5)

Prereq: 10 hrs in 204, 205, 206. Significant literary theme in Western literature, for example: concept of the Baroque, concept of time in Western literature, use and reinterpretation of myth in drama, concept of dissonance in poetry. Subject matter will change from qtr to qtr so that the course may be taken more than once for credit.

350A Teaching Language and Composition (3)

Prereq: jr rank. Content and methods of presentation for teaching language and composition in high school. Not applicable to Arts and Sciences 200-level requirement.

350B Teaching Literature (3)

Prereq: jr rank. Content and methods of presentation for teaching literature in high school. Not applicable to Arts and Sciences 200-level requirement.

351 The History of the English Language (5)

Prereq: 10 hrs above 199. Development of language in phonology, grammar and vocabulary from Anglo-Saxon times; readings in early English.

352 The Development of American English (5)

Prereq: 10 hrs above 199. History of English language in America; regional and social dialects, special developments in vocabulary, pronunciation, spelling and grammar.

393 Creative Writing Workshop: Short Story (5)

Prereq: 309 and perm. (fall) Instruction and practice in writing of fiction, concentrating on development of narrative techniques, character building in stories, "staging" scenes in a narrative, etc.

394 Creative Writing Workshop: Non-Fiction (5)

Prereq: 309 and perm. (winter) Will concentrate on writing non-fiction, and will explore general techniques of prose as they apply to fictionalized biography and the literary essay and as they are used to dramatize effectively works that are generally considered non-fiction.

395 Creative Writing Workshop: Poetry (5)

Prereq: 309 and perm. (spring) Experience and language of poetry, and upon practice of writing poetry.

410 Studies in Shakespeare (5)

Prereq: 301, 302 or 303 and sr rank. Intensive study of some aspect of Shakespeare's works and times.

411 Studies in Early English Literature (5)

Prereq: 311 and sr rank. (winter) Intensive study of some aspect of early English literature—author, genre, theme.

412 Studies in Renaissance Literature (5)

Prereq: 312 and sr rank. (fall, spring) Intensive study of some aspect of Renaissance literature—author, genre, theme.

413 Studies in Restoration and Neo-Classical Literature (5)

Prereq: 313 and sr rank. (winter) Intensive study of some aspect of Restoration and Neo-classical literature—author, genre, theme.

414 Studies in Romantic and Victorian Literature (5)

Prereq: 314 and sr rank. (fall, spring) Intensive study of some aspect of Romantic and Victorian literature—author, genre, theme.

417 Studies in Black Literature (5)

Prereq: 317A or perm. Intensive study of some aspect of Afro-American literature—author, period, theme, etc.

421 Studies in American Literature to the Civil War (5)

Prereq: 321 and sr rank. (winter) Intensive study of some aspect of American literature before the Civil War—author, genre, theme.

422 Studies in American Literature from the Civil War (5)

Prereq: 322 and sr rank. (fall, spring) Intensive study of some aspect of American literature since the Civil War — author, genre, theme.

431 Studies in Contemporary Literature (5)

Prereq: 331 and sr rank. (fall) Intensive study of some aspect of British and American literature of this century — author, genre, theme.

441 Studies in Comparative Literature (5)

Prereq: 341 and sr rank. (winter) Small seminar-type course devoted to a selected topic—a literary movement, a period, a genre, a figure, a problem — in which emphasis is placed on independent reading and criticism.

450 Readings in English Education (5)

Prereq: jr rank. Recent developments and writings in English education and their possible application to the teaching of jr and sr high school English.

451 Studies in Criticism (5)

Prereq: 20 hrs above 100 and sr rank or perm. (winter, spring) Some aspect of history and of problems in critical theory and its application.

453 Form and Theory of Fiction (5)

Prereq: 201, 309 and 393 or perm. Intended as sophisticated study of wide range of serious fiction from an authorial point of view. Novels, short stories and other forms of narrative literature. Aspects of various problems related to creative writing — scene construction, dialogue, characterization, structure, use of symbol, leitmotif, allegory and angle of narration—will be analyzed and discussed.

461 Colloquium (5)

Prereq: sr rank. (fall) Specific interdisciplinary problems to be assigned each qtr.

462 Colloquium (5)

Prereq: sr rank. (winter)

463 Colloquium (5)

Prereq: sr rank. (spring)

470 Special Studies (5)

Prereq: sr rank. Normally devoted to intensive study of one author.

490 Independent Reading (1-15)

Prereq: perm. Directed individual reading and research.

496 Advanced Workshop in Creative Writing (5)

Prereq: 10 hrs of creative writing and perm. (spring) Limited to 6 students, will consist largely of independent work in a particular literary genre. Students will meet together or individually with instructor, according to needs of particular work of that qtr.

H499 Honors Project (5-15)

Prereq: perm. Completion of individual writing project for BA with honors in English.

Humanities

107 Humanities—Great Books (3)

Prereq: fr and soph only. (fall) Classics of Western civilization leading toward an understanding of cultural heritage. Guidance in critical thinking, reading and writing about those works.

108 Humanities—Great Books (3)

Prereq: fr and soph only. (winter) Continuation of 107. See 107 for description.

109 Humanities—Great Books (3)

Prereq: fr and soph only. (spring) Continuation of 107, 108. See 107 for description.

307 Humanities—Great Books (3)

Prereq: jr and sr only. (fall) Classics of Western civilization, leading toward an understanding of cultural heritage. Guidance in critical thinking, reading and writing about those works.

308 Humanities—Great Books (3)

Prereq: jr and sr only. (winter) Continuation of 307. See 307 for description.

309 Humanities—Great Books (3)

Prereq: jr and sr only. (spring) Continuation of 307, 308. See 307 for description.

ENVIRONMENTAL DESIGN

See Design, Environmental

FINANCE

301 Personal Finance (3)

Prereq: not open to BBA students. Problems in managing personal finances. Budgeting expenditures and savings. Planning a life insurance program. Investment in savings accounts, securities, annuities and other financial assets. Use of consumer and mortgage credit. Personal taxes.

323 Money, Banking and Economic Activity (4)

Prereq: Econ 102 or 302. Nature of money, debt and credit; relations between money, finance and economic activity. Functioning of commercial banking system and other financial institutions. Operations and powers of Federal Reserve System and Treasury. Monetary policy and monetary theory.

325 Managerial Finance (4)

Prereq: Acct 102 or with Acct 102. Role of financial management in business enterprise; financial analysis; planning needs for short-term and long-term funds; planning for profits; capital budgeting; internal management of working capital and income; raising funds to finance growth of business enterprises.

331 Risk and Insurance (3)

Prereq: Econ 102 or 302. Social importance of risk and its place in personal, business and national life, including principles and methods of handling risk. Special interest in technique of insurance.

341 Investments (4)

Prereq: 325. Principles in determination of investment media for individual and institutional portfolios. Sources of investment information; analysis of financial statements; investment risks and yields. Securities markets and their behavior.

351 Money and Capital Markets (4)

Prereq: 323. Flow of funds, interest-price movements and institutions of money and capital markets. Trading in federal funds, open-market paper and other money market instruments. Portfolio policies of institutions active in mortgage loan market, corporate securities markets and markets for government securities and municipal obligations. Consideration of effects on financial markets of Federal Reserve and Treasury policies.

427 Management of Financial Institutions (4)

Prereq: 323. Analysis of objectives, functions, practices and problems of financial institutions as viewed by management of these institutions.

432 Property and Casualty Insurance (4)

Prereq: 331 or perm. Analysis of principal types of property and casualty insurance policies with respect to protection afforded policyholder, his obligations and cost of protection. Policies studied include fire and extended coverage, allied lines, business interruption, inland marine, automobile, general liability, theft and bonds. Subjects of risk, insurance law and multiple-peril policies also covered.

436 Life Insurance (4)

Prereq: 331 or perm. Fundamental economics of life insurance. Principles and practices of life insurance including types of contracts, group and industrial insurance and annuities.

437 Personal and Business Insurance Planning (4)

Prereq: 331. Consumer needs for all types of insurance; legal aspects and estate planning; risk management programs for business, including all forms of group insurance.

439 Insurance Regulations and Financial Management (4)

Prereq: 331. Underwriting, reinsurance, financial analysis and relevant insurance statutes and regulations.

442 Security Analysis (4)

Prereq: 341. Problems of selecting securities for various investment purposes. Industry structure, volume-price-cost relationships, management, financial position, terms of securities contracts and market price behavior studied to determine attractiveness of securities. Portfolio construction considered.

451 Monetary Policy (4)

Prereq: 323 or 12 hrs of economics. Policy-making machinery of monetary institutions. Relationship of Federal Reserve System, Treasury and commercial banking system; case studies in formulation and implementation of monetary policy. Effectiveness of monetary policy actions.

455 International Finance (4)

Prereq: 323. Problems in international finance. Financing international trade and other transactions; foreign exchange market and exchange market and exchange rates; international payments system. Foreign central banking and current developments in international financial cooperation.

461 Problems in Business Finance (4)

Prereq: 325. Case study of financial management in business enterprises. Planning current and long-run financial needs, profit planning, allocation of funds, raising funds, dividend policies, expansion and combination, recapitalization and reorganization.

463 Capital Allocation (4)

Prereq: 325. Planning capital outlays. Methods for ranking investment proposals. Theories of financial structure and cost of capital. Approaches to investment decisions under conditions of uncertainty.

465 Mathematical Analysis of Financial Decisions (4)

Prereq: 325. Application of quantitative methods to financial management, with special emphasis on systems approach to evaluating proposed financial decisions.

491 Seminar (3, 4 or 5)

Prereq: perm. Selected topics of current interest in finance area.

493 Readings (1-15)

Prereq: perm. Readings in selected fields of finance. Topics selected by student in consultation with faculty member.

495 Research (3, 4 or 5)

Prereq: perm. Methodology, analysis of data and preparation of research findings.

497 Independent Research (1-15)

Prereq: perm. Research in selected fields of finance under direction of faculty member.

FILM

The film program offers the following courses:

GfcD 338

Phot 361, 362, 363, 461, 462

AH 334, 335, 336A, 336B, 336C

FOREIGN LITERATURES IN TRANSLATION

See Modern Languages

FRENCH

See Modern Languages

GEOGRAPHY

The requirements of geography majors studying for the AB or BS degree are 50 quarter hours in approved geography courses including 101 or 201, 121, 130, 211, 260, 312, 470, 477 and at least one course from each of the following groups:

a) 331, 332, 430, 431; b) 235, 321, 425, 429. Completion of the above requirements automatically completes the College of Arts and Sciences requirement of 9 hours in the major at the junior-senior level.

Students wishing to pursue the BS degree must obtain a strong background in the physical and natural sciences. The selection of specific courses will be dependent on the student's interest and the advice of the faculty.

101 Elements of Physical Geography (3)

Systematic survey of earth-sun relationships, landforms, weather and climate, soils and natural vegetation as background for cultural geography which is recommended to follow this course. Not open to those who have had 201.

121 Elements of Cultural Geography (3)

Systematic survey of settlement, population and economic activities in geographic studies.

130 Economic Geography (4)

Survey of locational economic patterns and their interrelationships.

140 World Regional Geography—Eurasia (4)

(fall) Physical background, land utilization and cultural development of Europe and Asia.

141 World Regional Geography—Africa and Oceania (4)

(winter) Physical background, land utilization and cultural development of Africa, Australia, New Zealand and Pacific Islands.

142 World Regional Geography—Western Hemisphere (4)

(spring) Physical background, land utilization and cultural development of United States, Canada and Latin America.

201 Introductory Physical Geography (5)

Prereq: Not open to those who have had 101. Physical environment: earth-sun relationships, landforms, weather and climate; soils and natural vegetation. 4 lec, 2 lab.

211 Elements of Meteorology (4)

Prereq: 101 or 201. *R. Isaac*. General survey of physical principles of weather. 3 lec, 2 lab.

235 Geography of Resource Management and Conservation (3)

F. Bernard. Problems in management of renewable natural resources approached from geographic and ecologic viewpoints.

240 Geography of Eastern United States (3)

H. Wilhelm. Systematic and regional survey of eastern United States. Emphasis on cultural and economic development as conditioned by ethnic and environmental effects.

241 Geography of Western United States (3)

G. Zeck. Systematic and regional survey of western United States. Emphasis on cultural and economic development as conditioned by ethnic and environmental effects.

242 Geography of Ohio (3)

H. Wilhelm. Detailed regional study of physical background, settlement and economic development.

260 Map Reading and Interpretation (4)

(fall) *G. Zeck*. Uses and abuses of maps. Interpretation of topographic, thematic and cadastral maps. Emphasis on map analysis. 2 lec, 2 lab.

301 Advanced Physical Geography (4)

Prereq: 101 or 201, 211 or 312. Application of physical geographic principles to specific research problems.

312 Climate (4)

Prereq: 101, 201 or 211. *R. Isaac*. Exchanges of energy and moisture and their significance in man's utilization of earth's surface.

321 Advanced Cultural Geography (3)

J. Cobban. Systematic study of interaction of man and his societies with land. Emphasis on man's adaptation to and modification of earth's surface.

331 Geography of Agricultural Activity (4)

Prereq: 130 or perm. Spatial organization of agricultural systems at various levels of observation.

332 Geography of Manufacturing (4)

Prereq: 130 or perm. Locational considerations underlying spatial distribution of industrial activity.

340 Geography of Western Europe (4)

H. Wilhelm. Physical, cultural and economic geography of western Europe.

341 Geography of Eastern Europe (4)

Physical, cultural and economic geography of eastern Europe.

Geology

342 Geography of the Soviet Union (4)
Physical, cultural and economic geography of the Soviet Union.

345 Southeast Asia I (4)
J. Cobban. (fall) Systematic survey of physical and cultural aspects of Southeast Asia.

346 Southeast Asia II (4)
Prereq: perm. (winter) *J. Cobban*. Regional study of specific problems of Southeast Asia.

350 Geography of Northern Africa (4)
F. Bernard, B. Walter. Physical and cultural-historical geography and problems of economic development of northern Africa.

351 Geography of Sub-Saharan Africa I—Systematic (4)
(fall) *F. Bernard, B. Walter*. Systematic survey of physical and cultural aspects of tropical Africa.

352 Geography of Sub-Saharan Africa II—Regional (4)
(winter) *F. Bernard, B. Walter*. Regional survey of the 4 major areas of tropical Africa. A. East, B. West, C. Equatorial, D. Central and South.

355 Geography of South America (4)
Prereq: 101, 121 or perm. (fall) Physical, cultural and economic geography of the continent.

356 Geography of Middle America (4)
Prereq: 101, 121 or perm. (winter) Physical, cultural and economic geography of Mexico, Central America and the West Indies.

360 Cartography and Graphics (4)
Prereq: perm. *G. Zeck*. Elementary principles and construction of map projections, maps and graphs.

361 Statistical Cartography (5)
Prereq: 360 or equiv and perm. *G. Zeck*. Cartographic techniques of representing quantitative data on maps. 1 lec, 5 lab. Fee: \$5.

365 Air-Photo Interpretation (4)
Prereq: perm. *G. Zeck*. Principles and techniques used in air-photo interpretation for geographers, geologists, military, community planners and engineers.

425 Principles of Political Geography (4)
B. Walter. Geographic basis of national power and international relationships.

429 Settlement Geography (4)
(spring) *H. Wilhelm*. Arrangement, pattern and diagnostic forms of rural settlement in terms of cultural and historical antecedents and environmental effect.

430 Urban Geography I—Internal Nature of Urban Areas (4)
(winter) *R. Gardula*. Origin, functional structure and internal characteristics of cities, with emphasis upon the American city.

431 Urban Geography II—Urban Area and Region (4)
(spring) *R. Gardula*. Distribution, size, functional specializations and hinterland relationships characterizing cities, particularly in the United States.

460 Advanced Cartography (5)
Prereq: 360 or equiv and perm. *G. Zeck*. Principles of complete cartographic process from concept through design to finished product. 1 lec, 5 lab. Fee: \$5.

470 Development of Geographic Thought (4)
B. Walter. History of geography as a science and philosophy.

475 Research Methods in Geography (4)
Prereq: perm. (spring) *F. Bernard*. Research materials, methods of investigation and presentation of geographic data.

477 Quantitative Methods (4)
Prereq: perm. *R. Isaac*. Systematic survey of quantitative techniques employed by geographers.

490 Geographic Studies (1-3, max 9)
Prereq: perm. *F. Bernard* (G), *R. Gardula* (B, I), *R. Isaac* (C, D), *B. Walter* (E), *H. Wilhelm* (H), *G. Zeck* (A), staff (D, F). Supervised studies in fundamentals of geographic research. A. Cartography, B. Economic, C. Meteorology and Climatology, D. Physical, E. Political, F. Regional, G. Resource Management and Conservation, H. Settlement, I. Urban.

GEOLOGY

Required courses for the BS degree in minimum preparation for a professional career in geology are 204, 205 (101, 102 and 103 may be accepted in lieu of 204 and 205 toward a major with the approval of the department), 311, 312, 320, 330, 340, 350, 353, 360, 386 and 387, plus at least 9 hours at the 400 level. Geol 454 is required of those students who intend to pursue a career in paleontology, sedimentology or stratigraphy. In addition, the following extradepartmental courses are required: Chem 121, 142 and 143, physics through 253 (recommended) or 203 and mathematics through 263B.

Requirements for the AB degree include the above except 387. Required extradepartmental courses are chemistry through 123 and Math 116.

The Geology Department also offers a special program which prepares the student to work in the field of water resources. This program is described under special curricula in the College of Arts and Science.

Note: Prospective geology majors should register for Geol 204 and 205 instead of 101, 102 and 103.

101 Earth Materials and Structure (4)

Nature and distribution of earth materials and their utilization as natural resources; discussion of earth structure, earthquakes, mountain building and continental drift. 3 lec, 2 lab. Not open to students who have had 204 or 283.

102 Surface Processes and Environmental Geology (4)

Consideration of those processes and resources that influence man's utilization of surface of the earth. 3 lec, 2 lab. Not open to students who have had 204 or 283. It is recommended that students who plan to take both 101 and 102 take 101 first.

103 Elements of Geology, Historical (3)

Prereq: 102. Earth history, emphasizing geologic history of North America. 2 lec, 2 lab, field trips. Not open to students who have had 205.

202 Common Minerals, Rocks and Fossils (3)

Study and identification of common minerals and rocks and common groups of fossils. 2 lec, 2 lab, field trips. Not open to students who have had 102 or 204.

204 Physical Process in Geology (5)

Prereq: introductory course in chemistry and physics at high school or college level or perm. (fall) Principles of geologic processes and development of earth features. For geology majors and other students with a science background. 3 lec, 4 lab, field work. Not open to students who have had 102.

205 Concepts in Historical Geology (3)

Prereq: 204. (spring) Basic concepts in historical geology, emphasizing interrelationships between geologic processes and changing character of earth's surface and life through time. 2 lec, 2 lab, field work. Not open to students who have had 103.

270 World Mineral Resources (3)

(1st summer term) Major deposits of metal, non-metallic and mineral fuels resources which form backbone of modern industry. Economics

and basic geologic controls of mineral production are reviewed. 3 lec with demonstrations. Not open to geology majors.

283 Geology for Engineers (5)

(spring) *S. Fisher*. Geologic principles applied to engineering projects and materials. 4 lec, 2 lab. Not open to students who have had 101 or 204.

310 Rocks and Minerals (5)

Prereq: 102, 204 or 283. (winter) *G. Heien, W. Phelps*. Common minerals, rocks and related ores, including their classification, description, origin and use. 3 lec, 4 lab. Not open to geology majors.

311 Crystallography (3)

Prereq: Chem 142 or taken concurrently. (fall) *G. Heien*. Elements of crystallography and introduction to crystal chemistry. 2 lec, 2 lab.

312 Mineralogy (5)

Prereq: 311. (winter) *W. Phelps*. Descriptive and determinative mineralogy using physical and chemical properties. 3 lec, 4 lab.

320 Petrology (4)

Prereq: 312. (spring) *W. Phelps*. Rocks emphasizing origin, composition, field classification and identification. 3 lec, 2 lab.

330 Principles of Geomorphology (5)

Prereq: 102 or 204. (spring) *G. Smith*. Basic concepts of origin and development of landforms. Laboratory study of topographic maps and aerial photographs. 3 lec, 4 lab, field trips.

340 Invertebrate Paleontology (5)

Prereq: 103 or 205. (fall) *M. Sturgeon*. Invertebrate fossils emphasizing their morphology, classification, biologic relationships and geologic occurrence. 3 lec, 4 lab, field work.

350 Principles of Sedimentology (4)

Prereq: 320. (winter) *S. Fisher*. Principles of transport, deposition and diagenesis of sediments. 3 lec, 2 lab, field trips.

353 Principles of Stratigraphy (4)

Prereq: 350. Should be taken concurrently with 360. (spring) *J. Howard*. Basic concepts of stratigraphy, historical development of facies concept, principles of stratigraphic nomenclature and correlation. 3 lec, 2 lab, field work.

360 Structural Geology (5)

Prereq: 320, Phys 201, Math 263B or perm. Should be taken concurrently with 353. (spring) *R. Yeats*. Principles of rock deformation from field and laboratory evidence, in-

Geology

terpretation of folded and faulted rocks, introduction to tectonics. 3 lec, 2 lab, field work.

386 Geologic Field Methods (3)

Prereq: CE 110 recommended, perm. (fall) Use of hand level, Brunton pocket transit, plane table and telescopic alidade, altimeter and aerial photographs in mapping. 6 lab.

387 Summer Field Geology (9)

Prereq: 320, 360 or perm. (8 weeks, summer) *R. Yeats*. Geologic mapping in deformed sedimentary, igneous and metamorphic terranes to include use of Brunton compass, hand level and air photos. Written field report will be required. Course conducted in eastern Nevada.

401 Introductory Oceanography (3)

Prereq: Chem 122, 18 hrs biology, geology or physics, perm. Survey of physical, chemical, biological and geological aspects of oceanography.

406 Geology of Ohio (3)

Prereq: 103 or 205. (upon demand) *M. Sturgeon*. Physiography, stratigraphy and economic geology of Ohio. 2 lec, 2 lab, field trips.

407 Topographic Map and Aerial Photo Interpretation (4)

Prereq: 330, 360 or perm. (winter) *G. Smith*. Principles of use of topographic maps and aerial photographs for study and interpretation of geologic and geomorphic features. 2 lec, 4 lab.

408 Statistical Applications in Geology (3)

Prereq: perm. (winter) *J. Howard*. Basic statistical techniques with particular applications of statistics to geology. 2 lec, 2 lab.

413 Optical Mineralogy (4)

Prereq: 320, Phys 202. (fall) *G. Heien*. Optical characteristics of minerals in polarized light; identification of minerals with petrographic microscope. 2 lec, 4 lab.

414 Structural Mineralogy (4)

Prereq: 312. (spring) *G. Heien*. Advanced crystallography applied to internal structures, nature of mineral structures and principles of crystal chemistry. 3 lec, 2 lab.

415 X-Ray Methods (3)

Prereq: Phys 203, perm. (winter) *G. Heien*. Principles of x-ray diffraction and x-ray crystallography; identification of minerals and analysis of mineral structures by powder method. 2 lec, 2 lab.

422 Igneous and Metamorphic Petrography (4)

Prereq: 413 (winter) *R. Yeats*. Petrogenesis of igneous and metamorphic rocks and their

description and classification in thin section. 2 lec, 4 lab.

424 Sedimentary Petrography (3)

Prereq: 350, 413. (winter) *S. Fisher*. Identification and environmental analyses of sedimentary rocks in thin section and grain mounts. 2 lec, 2 lab.

426 Principles of Geochemistry (3)

Prereq: 320, Math 160B. (spring) *G. Heien*. Principles of geochemistry applied to various geologic environments, including principles of thermodynamics applied to geologic systems, phase equilibria, solution geochemistry, isotope geochemistry and radioactive dating. 3 lec.

438 Glacial Geology (5)

Prereq: 330. (fall) *G. Smith*. Formation and behavior of glaciers, past and present; consideration of glacial processes and causes and implications of ice ages. 3 lec, 2 lab, field trips.

439 Quaternary Geology (3)

Prereq: 438 or perm. (spring) *G. Smith*. Stratigraphic study of Quaternary deposits, with emphasis on North America; techniques of study of Quaternary deposits. 3 lec, field trips.

441 Invertebrate Paleontology: Index Fossils (4)

Prereq: 340. (winter) *M. Sturgeon*. Selected index genera and faunas. 2 lec, 2 lab, field work.

446 Principles of Micropaleontology (4)

Prereq: 340, perm. (winter) *J. Howard*. Biology, morphology, taxonomic characteristic and uses of microscopic fossils. 2 lec, 4 lab.

448 Principles of Paleocology (4)

Prereq: 340, 350, biology or zoology, 9 hrs, perm. (fall) *J. Howard*. Basic principles involved in reconstruction of paleoenvironments. 3 lec, 2 lab, field work.

451 Advanced Sedimentology (2)

Prereq: perm. *S. Fisher*. Geochemistry of sediments, resume of optimum sampling, current presentations of sedimentary data. 1 lec, 2 lab.

454 Historical Geology (5)

Prereq: 340. (spring) *M. Sturgeon*. Earth history emphasizing geologic development and stratigraphy of North America. 4 lec, 2 lab, field work.

460 Advanced Structural Geology (3)

Prereq: 360, 413. (winter) *R. Yeats*. Mechanical analysis of deformed rocks, structural analysis using stereonet, structural petrology, present-day crustal deformation. 3 lec.

470 Economic Geology—Metals (4)

Prereq: 320. (fall) Principles of metallic mineral deposition and survey of major ore deposits of the world. 3 lec, 2 lab.

471 Ore Deposits (3)

Prereq: 470. (winter) *W. Phelps*. Texture, paragenesis and origin of metallic ores in polished sections. 2 lec, 2 lab.

473 Economic Geology—Non-Metals (3)

Prereq: 320. (fall) *S. Fisher*. Principles of nonmetallic mineral deposition and survey of nonmetallic and coal deposits of the world. 2 lec, 2 lab.

475 Petroleum Geology (4)

Prereq: 360. (fall) *S. Fisher*. Origin, migration and accumulation of petroleum and survey of major oil basins of the world. 3 lec, 2 lab.

476 Subsurface Methods (4)

Prereq: 475 or perm. (winter) Resume of drilling practices, sampling and logging by electric, radioactivity, temperature, neutron methods as applied to petroleum exploration and engineering projects. 3 lec, 2 lab.

480 Applied Ground Water Hydrology I (4)

Prereq: perm. (fall) *M. Ahmad*. Darcy's Law, permeability, laboratory and field measurement of permeability, steady and unsteady flow to a well, non-equilibrium equation of pumping test, analysis of pump test data. 3 lec, 2 lab.

481 Applied Ground Water Hydrology II (4)

Prereq: perm. (winter) *M. Ahmad*. Water well design, well development, testing of wells, design of a well field, interference of wells, study for a ground water basin, chemistry of ground water, ground water pollution. 3 lec, 2 lab.

485 Applied Geophysics (4)

Prereq: perm. (spring) *M. Ahmad*. Introductory course on seismic, gravity and electrical prospecting. 3 lec, 2 lab.

488 Geologic Field Reconnaissance (2 or 3)

Prereq: perm. (winter) Spring vacation period geologic field trips to selected areas in eastern and central United States with pertinent conferences, readings and reports.

490 Seminar in Geology (1, max 3)

Prereq: perm. Several seminars on specific topics in geology will be offered yearly. It is recommended that all majors participate in at least 1 seminar.

491 Geologic Studies (1-4, max 8)

Prereq: perm. *Ahmad (D), Fisher (E,G), Heien (A,E), Howard (F,G), Phelps (E,G), Smith (B), Sturgeon (C,F,G), Yeats (H,I)*. A. Geochemistry, B. Geomorphology, Glacial Geology and Physiography, C. History of Geology, D. Hydrogeology, E. Mineralogy, Petrology and Economic Geology, F. Paleontology, G. Sedimentation and Stratigraphy, H. Structural Geology, I. Tectonics. Supervised studies in fundamentals of geologic research.

GERMAN

See Modern Languages

GOVERNMENT

The major requirement for the AB degree is a minimum of 45 hours, including Govt 101 and 102. Majors must also satisfy the following requirements: (a) a minimum of one course in political theory, and (b) at least three courses above 300 in each of the two areas of (1) American government and politics, and (2) comparative/international politics. Fulfillment of requirement (b) above also guarantees completion of the requirement of the College of Arts and Sciences of nine hours of junior-senior level.

101 American National Government (4)

Not open to jrs and srs. Constitutional basis and development, political processes and organization of American national government.

102 American National Government (4)

Prereq: 101. Continuation of 101. Not open to jrs and srs. Concerned with administration and policy making processes of national government in selected areas *i.e.*, welfare, civil rights, defense, etc.

303 Urban Politics (5)

Prereq: 101-102. *J. Barnes*. Impact of urbanization on structure and functions of municipalities. Emphasis on role of government in resolving community conflict.

304 Politics in the American States (5)

Prereq: 101-102. *J. Tucker*. Comparative analysis of state political systems. Emphasis on structure and process of policy-making of states within a federal context.

305 Black Politics in the United States (4)

Prereq: 101 or perm. Appraisal of economic and institutional structure of American society through social doctrines enunciated by black political theorists, which serve as inspiration and ideology for black political movements. Examines socio-political societies in various parts of Africa and interprets black political movements in cultural, philosophical, ideological and technological terms.

306 Politics of Appalachia (4)

Prereq: 101 or perm. Analysis of political processes of Appalachia. Emphasis on relationship between politics and economic development of the region. Among major policy areas considered are mining and its regulation, the War on Poverty in Appalachia and the politics of taxation in the region.

331 Comparative Government (4)

Government and politics of Great Britain and another Commonwealth country.

332 Comparative Government (4)

Government and politics of France and Germany.

333 Comparative Government (4)

Government and politics of Communist party states with particular emphasis on the Soviet Union.

334A Government and Politics of Latin America (4)

Prereq: 8 hrs of government or course in Latin American history. *M. Hochwald*. Contemporary governments of Latin America. Emphasis on structure of political parties and institutions.

334B Government and Politics of Latin America (4)

Prereq: 334A. *M. Hochwald*. Revolution in Latin America. Emphasis on Mexican and Cuban revolutions.

335 The Politics of Developing Areas (4)

Prereq: 8 hrs or perm. Major theories and problems of political, socio-cultural and economic development in new nations of Asia, Africa and Latin America, with special emphasis on heritage of colonialism, struggle for independence and political adjustments to rapid social and technological change.

350 International Relations (5)

Prereq: 8 hrs. *R. Bald, S. Kim*. Contemporary international system and major forces and conditions which affect current international politics. Special emphasis on role of conflict and need for peaceful conflict resolution.

351 Current International Problems (3)

Prereq: 350. *R. Bald, S. Kim*. Selected case studies, crises and current issues illustrating major problems of contemporary international politics.

371 Ancient and Medieval Political Thought (5)

Prereq: 11 hrs. *R. Hunt*. Major figures and basic concepts characteristic of political thought in ancient and medieval periods. Emphasis on original works of Plato, Aristotle, St. Augustine, Dante.

372 Modern Political Thought (5)

Prereq: 11 hrs. *R. Hunt*. Basic philosophic conceptions of the state: Machiavelli to Hegel. Emphasis on original works of major political philosophers of this period.

373 Contemporary Political Thought (5)

Prereq: 11 hrs or perm. *R. Hunt*. Emphasis on tradition of political economy, utilizing original works of such individuals as J. S. Mill, K. Marx and F. Engels.

401 American Constitutional Law (3)

Prereq: 14 hrs government or history. *R. Gusteson*. Principles underlying American constitutional government. Consideration of leading cases with reference to interpretation of the Constitution of the United States.

402 American Constitutional Law (3)

Prereq: 14 hrs government or history. Continuation of 401. See 401 for description.

405 American Political Parties (3)

Prereq: 11 hrs. *R. Gusteson*. Origin, growth, organization and methods of parties; suffrage, nominations and elections; role of parties in a democracy.

406 Pressure Groups and Public Policy-Making (5)

Prereq: 11 hrs. *J. Tucker*. Organization and tactics of pressure groups and their impact on policy-making process.

408 Legislative Processes (5)

Prereq: 11 hrs. *R. Eagle*. Environments in which legislatures function, various participants in legislative processes, formal and informal legislative structure and procedures and politics of legislative reform. Classroom simulations provide opportunities for student role playing. Emphasis is on American national and state legislatures.

409 Law Enforcement (5)

Prereq: 15 hrs. Role, function and problems of American judicial, prosecutory, policing and correctional systems in the political process.

Crime and law as functions of social and political systems. Examination of relationship of law and social change in industrialized, urbanized and technical society.

411 Public Administration (4)

Prereq: 11 hrs. *E. Collins*. Development of administrative organizations, current ideas in organizational theory, nature of federal bureaucracy, fiscal management and control of administrative action.

412 Public Personnel Administration (4)

Prereq: 11 hrs. *E. Collins*. Philosophy, problems and procedures of public personnel management: recruitment, training, promotion policies, position classification and employer-employee relations.

413 Administrative Law (5)

Prereq: 11 hrs. *E. Collins*. Organization, functions and procedures of selected national regulatory agencies; principles affecting administrative discretion, administrative power over private rights, enforcement and judicial control of administrative decisions.

414 Public Administrative Organization and Behavior (5)

Prereq: 411 or perm. *R. Eagle*. Analysis of ways people behave in public administrative organizations, emphasizing interpersonal and interagency relationships within bureaucracies and interactions of administrators with private individuals, interest groups, legislators, the press, public opinion and political parties.

415 The American Presidency (3)

Prereq: 11 hrs. *R. Gusteson*. Analysis of office of national chief executive and its place in American political system. Attention given to constitutional status and powers, functional development and interrelationship of man and office.

420 American Foreign Policy (5)

Prereq: 11 hrs government or history. *E. Collins*. Consideration of problems involved in formulation and execution of foreign policy. Particular emphasis on contemporary problems of American policymakers.

421 Conduct and Administration of American Foreign Policy (5)

Prereq: 350 or 420. Covers institutional and administrative as well as political and more informal processes whereby foreign policy decisions are formulated and implemented in the United States.

432 Government and Politics of the Soviet Union (5)

Prereq: 11 hrs, incl 333 or course in Soviet history. Institutions, nature and policies of

Soviet system of government, including historical background, ideology and organization, as well as dynamics of ideology and power and nature of totalitarian systems.

433 Soviet Foreign Policy (5)

Prereq: 11 hrs, incl 333 or a course in Soviet history. Analysis of foreign policies of U.S.S.R. Historical, ideological, strategic and other influences covered. Relations with bloc countries included.

438 Government and Politics of Germany (5)

Prereq: 11 hrs including 332 or perm. *R. Bald*. Major political processes, personalities and institutions of contemporary West Germany, including key foreign policy issues.

441 Government and Politics of Africa (5)

Prereq: 11 hrs government or history. *E. Baum*, *R. Weisfelder*. Development and structure of modern African states with emphasis on political processes in tropical Africa.

445 Government and Politics of Japan (4)

Prereq: 11 hrs of government or Asian history. *W. Elsbree*. Political institutions and processes of Japan with emphasis on developments since 1945.

446 Government and Politics of China (4)

Prereq: 11 hrs of government or Asian history. *W. Elsbree*. Political institutions and processes and major political developments in modern China.

447A Government and Politics of Southeast Asia (4)

Prereq: 11 hrs government or history. *P. van der Veur*. From ancient empires to Western colonial rule; rise of nationalism and arrival of independence in post WW II period. Main emphasis on political developments in Indonesia and the Philippines.

447B Government and Politics of Southeast Asia (4)

Prereq: 11 hrs government or history. Continuation of 447A but can be taken independently. Period of independence since WW II with main emphasis on political developments in Indonesia and Malaysia.

448 Political Systems of Southeast Asia (4)

Prereq: perm. *P. van der Veur*. Deals with political systems of Indonesia, Malaysia and the Philippines. Emphasis on both traditional and modern aspects of politics and administration and indigenous contributions to latter.

Health, Physical Education and Recreation

450 Theory and Methodology of International Relations (5)

Prereq: 350 or perm. Major theoretical approaches to study of international relations. Includes recent work in areas such as survey research, communications, decision-making, simulation, strategy and game theory. Both traditional theories and behavioral models will be examined.

455 International Law (5)

Prereq: 350. *S. Kim*. Role of international law in interstate relations and international organization.

456 International Organization (5)

Prereq: 350. *S. Kim*. Analysis of nature, development, structure and functions of international organizations with particular emphasis on United Nations.

461 New States in World Politics (4)

Prereq: 350. *E. Baum*. Detailed examination of impact of new states on international relations. Particular attention given to problems and foreign policies of new states.

462 Race and Politics in Southern Africa (5)

Prereq: Any course on Africa. *R. Weisfelder*. Political dynamics of race relations among diverse peoples of Southern Africa. Emphasis on competing ideologies of *apartheid* and black liberation. Appropriate American and international responses will be considered.

471 Modern Political Analysis (5)

Prereq: 20 hrs, perm. *J. Tucker*. Examination of problems of knowledge in social sciences with particular emphasis on political science. Analysis of major theories or approaches developed in political science recently.

472 Quantitative Political Analysis (5)

Prereq: 471 or perm. *D. Dabelko*. Designed to show relevance of scientific research techniques to study of politics.

473 Personality and the Political Process (5)

Prereq: 15 hrs or perm. *D. Dabelko*. Relevance of personality characteristics, psychological mechanisms and life history factors in explaining political behavior. Topics are behaviorism, psychoanalytic theory, authoritarianism, dogmatism and other personality traits as related to political beliefs and behavior.

474 19th Century Political Thought (4)

Prereq: 15 hrs government or European history. *W. Elsbree*. Movements in 19th century political thought in Europe; liberalism, socialism, irrationalism among subjects covered.

475 20th Century Political Thought (5)

Prereq: one course in political theory. *R. Hunt*. Selected issues in contemporary political theory, e.g., proposals for reform of political system, role of intellectuals in politics, analysis of key political concepts.

476A American Political Thought (3)

Prereq: 11 hrs of government or history. *A. Pringley*. Origin and development of political ideas from colonial period through slave controversy.

476B American Political Thought (3)

Prereq: 476A. Continuation of 476A. Begins with Social Darwinism and concludes with contemporary political ideas in America.

490 Studies in Government (3-5)

Prereq: 18 hrs, perm. Intensive study of special topics in field of government, including American government and politics, comparative government, international relations, political theory and public administration.

491 Research in Government (1-5, max 10)

Prereq: 18 hrs, perm. Seminar in selected fields of government.

498 Problems in Government (1-5, max 10)

Prereq: 18 hrs, perm. Research or directed reading based on student's special interest.

GRAPHIC DESIGN

See Design, Graphic

GREEK

See Classical Languages

HAUSA

See Linguistics

HEALTH, PHYSICAL EDUCATION AND RECREATION

Required and Elective Activity Classes

100A Archery (1)

100B Badminton (1)

- 100C Basic Movement (1)
- 100D Basketball (1)
- 100E Boating (1)
- 100F Bowling (1)
- 100G Conditioning and Weight Training (1)
- 100H Crosseball (1)
- 100I Curling (1)
- 100J Fencing (1)
- 100K Folk and Dance (1)
- 100L Golf (1)
- 100M Intermediate Golf (1)
- 100N Gymnastics (1)
- 100O Handball (1)
- 100P Judo (1)
- 100Q Karate (1)
- 100R Life Saving (1)
- 100S Riding (1)
- 100T Skating (1)
- 100U Figure Skating (1)
- 100V Advanced Figure Skating (1)
- 100W Squash (1)
- 100X Swimming (1)
- 100Y Intermediate Swimming (1)
- 100Z Tennis (1)
- 100.1 Intermediate Tennis (1)
- 100.2 Volleyball (1)
- 100.3 Social Dance (1)
- 100.4 Scuba (1)
- 100.5 Water Polo (1)
- 100.6 Modern Dance (1)
- 100.7 Ice Hockey Fundamentals (1)
- 100.8 Lacrosse (1)
- 100.9 Softball (1)
- 101A Intermediate Judo (1)
- 101B Intermediate Karate (1)
- 101C Advanced Tennis (1)
- 101D English Riding and Jumping (1)

Professional Classes

- 103 Beginning Swimming (1)
Non-swimmers and beginners.
- 104 Intermediate Swimming (1)
Prereq: 103 or equiv. Students who can swim; instruction in basic strokes, plain and surface diving.
- 105 Advanced Swimming (1)
Prereq: 104 or equiv. Analysis and perfection of 9 basic styles of swimming; diving.
- 107 Beginning Modern Dance (1)
Basic principles of dance technique. Simple movement progressions.
- 108 Intermediate Modern Dance (1)
Prereq: 107 or equiv. More complex warm-ups and floor progressions involving relationships of time, space and dynamics.
- 109 Advanced Modern Dance (1)
Prereq: 108 or equiv. Experimentation in movement form and composition.
- 115 Folk and National Dance (1)
American square and European dances.
- 116 Advanced Folk and National Dance (1)
Prereq: 115. Continuation of American square and European dances.
- 202 Personal and Community Health (4)
Hygienic practices and appreciation of means whereby health of individual and group may be maintained.
- 218 Life Saving and Water Safety (1)
Prereq: 105 or equiv. Principles and practices of life saving.
- 220 Water Safety for Instructors (1)
Prereq: 218. For those who hold valid American Red Cross Life Saving Certificate. Includes analysis of swimming, life saving techniques and teaching practices.
- 221 Tennis and Badminton (3)
Skills, strategy, tactics and rules of tennis and badminton.
- 222 Tumbling and Gymnastics (3)
Tumbling, gymnastics and related activities.
- 223 Track and Field (2)
Participation in track and field activities suitable for girls and women.
- 227 First Aid (4)
Principles and practices of American Red Cross first aid. Standard certificate is granted if requirements are met.

Health, Physical Education and Recreation

250 Recreation Leadership (5)

Social recreation, group work and handicraft.

252 Kinesiology (4)

Prereq: Zool 301. Analysis of human motion based on anatomical and mechanical principles.

261 Introduction to Physical Education (1)

Lectures, discussion and visual aids pertaining to scope and content of professional physical education.

262 Field Hockey and Soccer (3)

Skills, tactics, strategy and rules.

263 Basketball and Volleyball (3)

Skills, tactics, strategy and rules.

264 Softball and Archery (3)

Skills, tactics, strategy and rules.

265 Program Skills (2)

Teaching methods, materials, theory and practice in soccer, speedball, volleyball and officiating.

266 Elementary School Physical Education (2)

Theory, teaching methods, techniques and materials in elementary school physical education, with emphasis on appropriate rhythmical, individual and group activities.

267 Program Skills (2)

Teaching methods, techniques, materials, theory and practice in swimming, tennis and officiating.

270 Teaching of Physical Education (2)

Lab and lecture experiences for teaching physical education in elementary school. Designed for elementary education students.

305 Coaching of Swimming (2)

Prereq: jr or sr rank.

314 Camp Craft (4)

Experiences in fire building, outdoor cooking, overnight hiking and other camping crafts.

318 Coaching of Tennis (2)

Prereq: jr or sr rank.

320 Coaching of Wrestling (3)

Prereq: jr or sr rank.

321 Program Skills (2)

Teaching methods and materials, theory and practice in archery, handball, bowling and badminton.

322 Program Skills (2)

Teaching methods, techniques, materials, theory and practice in stunts and tumbling, apparatus, demonstrations and exhibitions, marching and conditioning activities.

323 Program Skills (2)

Teaching methods, techniques, materials, theory and practice in wrestling, golf and outdoor education.

324 Coaching of Soccer (2)

Prereq: jr or sr rank.

328 Instructor's First Aid (4)

Prereq: current first aid certificate. As prescribed and certified by the American Red Cross.

329 Athletic Training (4)

Prereq: Zool 301 and perm. Treatment and prevention of athletic injuries.

333 Theory of Adapted Activities (4)

Prereq: Zool 301. Organization of physical activity programs adapted to needs of physically handicapped individuals.

334 Program Techniques (1)

Prereq: jr or sr rank. Organization, teaching and management of health education, physical education and recreation classes.

337 Dance Composition (1)

Prereq: 109 or equiv. Basic principles of composition and presentation.

339 Athletic Officiating (9)

(fall—football; winter—basketball; spring—baseball) 3 hrs credit each qtr. Rules, mechanics and procedures in football, basketball and baseball officiating. Practice in all sports under actual game conditions. State certification upon successful completion of national exam given in sport. OHSAA fee for each sport.

340 Sports Officiating I (1)

Officiating field hockey and soccer.

341 Sports Officiating II (1)

Officiating basketball and volleyball.

342 Sports Officiating III (1)

Officiating softball, track and field.

345 Camp Leadership (2)

Responsibilities of camp counselors. Includes program planning and practical leadership experiences.

351 Coaching of Golf (2)

Prereq: jr and sr rank. Theory and practice.

352 Coaching of Ice Hockey (3)
Prereq: jr and sr rank. Theory and practice.

353 Coaching of Lacrosse (3)
Prereq: jr and sr rank. Theory and practice.

365 Coaching of Basketball (3)
Prereq: jr or sr rank. Theory and practice.

366 Coaching of Baseball (3)
Prereq: jr or sr rank. Theory and practice.

367 Coaching of Football (3)
Prereq: jr or sr rank. Theory and practice.

368 Coaching of Track (3)
Prereq: jr or sr rank. Theory and practice.

369 Teaching of Health (5)
Prereq: HPEC 202; EdSe 250. Instruction, principles and curricula used in presenting health information to pupils in elementary and secondary schools.

371 Theory and Practice in Sports Activities I (2)
Prereq: experience in field hockey, basketball, volleyball. Methods and materials for teaching team sports.

372 Theory and Practice in Sports Activities II (2)
Prereq: experience in gymnastics, track and field. Methods and materials for teaching individual sports.

374 Theory and Practice in Rhythmic Activities I (1)
Prereq: 115. Methods and materials for rhythmic programs for various school levels.

375 Theory and Practice in Rhythmic Activities II (1)
Prereq: 109 or equiv. Teaching of modern dance at elementary and secondary school levels.

381 Administration of Intramural Sports (4)
Organizing and administering a program of intramural sports for all age levels.

404 History and Principles of Physical Education (5)
Principles underlying physical education in modern program of education.

406 Organization and Administration of Physical Education (5)
Prereq: jr or sr rank. Organizing and administering physical education, recreation and athletics in schools and colleges.

409 Tests and Measurements (5)
Prereq: sr rank. Administration and evaluation of tests in health, physical education and athletics; practice in handling test data by elementary statistical methods.

414 Physiology of Exercise (4)
Fundamental concepts describing reaction of organ systems to exercise; study of work produced by muscle; special areas include sport conditioning, muscular fatigue, physiology and nutrition in exercise, weight control and exercise; physical fitness; exercise and environmental stresses; review of recent research in exercise physiology and human performance.

435 Recreation and Physical Education for the Mentally Retarded and Learning Disabled (5)
Prereq: perm.

449 Community Recreation (4)
Prereq: sr rank. History of play movement, programs and program building, administration of playgrounds, community centers and recreational activities.

453 Clinical Observation and Practice in Physical Medicine and Rehabilitation (6)
Prereq: Zool 301, 345 or equiv. (summer) Concentrated summer school field course at V.A. hospital, Chillicothe. Instruction by hospital corrective therapy staff. Open to sr majors or grad students in physical education.

495 School Health Problems (5)
Prereq: 369 and sr rank. Principles, problems, organization and administration of school health programs, including school and community relationships.

HEARING AND SPEECH SCIENCES

The curriculum in hearing and speech sciences is designed to give the student a basic understanding of the causes and treatment of various speech and hearing disorders. Students who plan to qualify for an Ohio Teaching Certificate in Speech and Hearing Therapy make application for this certificate through the College of Education. Students who do not intend to qualify for this certificate, and therefore do not intend to student teach, must apply personally to the Director of the School of Hearing and Speech Sciences for admission to the clinical major program and will be required to complete special academic and practicum requirements in the major and in related fields. All majors must earn a grade of C or above in all HSS courses.

107 Voice and Articulation (2)

Prereq: Open only to HSS majors. Designed to help each student recognize, evaluate and compensate for or improve speech production characteristics. Speech proficiency judgement required for all majors will be performed each qtr in this course.

108 Introduction to Speech Disorders (3)

Symptoms, causes, effects and evaluation of disorders of speech, voice and language.

309 Phonetics (3)

(fall, spring) Speech sounds from a sociological, physiological and acoustical point of view. Mastery of International Phonetic Alphabet and practice in English phonetic transcription. Phonetics proficiency requirement for HSS majors will be administered in this course.

310 Language Development (5)

Prereq: 309. (winter) Provides foundation in normal speech and language development. Development of meaning, symbolic representation, morphology and syntax.

313 Respiratory and Phonatory Mechanisms (3-4)

Prereq: 6 hrs natural science. (fall) Structures, musculature and functions involved in respiration, phonation, resonance and articulation for speech.

314 Articulatory and Auditory Mechanisms (3-4)

Prereq: 313. (winter) Structures, musculature, functions and neurology involved in audition and speech.

336 Speech and Hearing Disorders in the Public Schools (3-4)

Nature, causes and treatment of defective speech in public schools with special reference to role of classroom teacher. Not open to HSS majors.

350 Speech Science (3-4)

Prereq: 6 hrs science. (winter) Physical properties of speech signal. Analysis of speech and speech reception.

351 Laboratory Methods in Speech Science (3-4)

Prereq: 350. (spring) Physical parameters of speech signal. Laboratory exercises and experiments emphasized. 2 lec, 3 lab.

370 Basic Audiology (3-4)

Prereq: 314, 350. (spring) Measurement of hearing with pure tone techniques and interpretation of results of such measurements in terms of social and educational handicap.

371 Auditory Rehabilitation (3-4)

Prereq: 370. (fall, winter) Basic remedial procedures employed with hearing handicapped. Practice in planning lessons in speech reading and auditory training.

411 Advanced Phonetics (3-4)

Prereq: 309. (winter) History of phonetics in linguistics and experimental investigation of speech sound production. Advanced training in phonetic transcription.

415 Stuttering (5)

Prereq: HSS majors only; 9 hrs psychology. (winter) Consideration of causes, types and effects of stuttering. Evaluation of stuttering. Practical consideration of therapy for stutterers, with emphasis on children's problems.

418 Disorders of Articulation (5)

Prereq: HSS majors only; 309, 310. (fall) Phonetic acquisition, articulation evaluation. Emphasis on practical approaches to therapy for individuals with articulation disorders.

419 Disorders of Voice (4)

Prereq: HSS majors only; 313. (spring) Consideration of types and causes of functional and organic voice problems. Evaluation of phonatory problems. Emphasis on practical approaches to therapy.

422 Diagnostic Procedures in Speech Pathology (3-4)

Prereq: 12 hrs speech pathology, 9 hrs psychology. (spring) Types of diagnosis in evaluation of speech and language problems. Screening tests; use of statistics in testing; basic interview and history procedures.

424 Neuropathologies of Speech and Language (3-4)

Prereq: 313, 314. (fall, winter) Types, causes and syndromes of more significant pathologies of speech and language. Particular attention paid to neurological disorders.

433 Professional Training Seminar (3-4)

Prereq: sr rank, perm. Seminar in concepts underlying therapy procedures. Application of psychological, physiological and neurological principles in various rehabilitation approaches. Lab time required.

440A Sophomore Practicum (1)

Prereq: HSS majors only. Lectures and videotapes of diagnosis, therapy planning, therapy and various areas of the profession. 1 meeting per wk. Required of each student each qtr of soph yr.

440B Sophomore Practicum (1)

Prereq: HSS majors only. Continuation of 440A. See 440A for description.

440C Sophomore Practicum (1)

Prereq: HSS majors only. Continuation of 440A,B. See 440A for description.

441A Junior Practicum (1)

Prereq: 440A,B,C. Observation of and assignment to diagnosis, planning of therapy, therapy activity. One staff meeting a wk plus clinic time. Repeated each qtr of jr yr. HSS majors only. 440C and 441A can be concurrent.

441B Junior Practicum (1)

Prereq: 440A,B,C. Continuation of 441A. See 441A for description.

441C Junior Practicum (1)

Prereq: 440A,B,C. Continuation of 441A,B. See 441A for description.

442A Practicum (1-3)

Prereq: No grade below C on HSS courses, or perm of SHSS director and clinic coordinator. Diagnosis, planning of therapy, therapy experience. Ratio of 3 clock hrs a wk per qtr hr. May be repeated. Accumulated credit over 2 hrs must be approved. Sr HSS majors only.

442B Practicum (3-15)

Diagnosis, planning of therapy, therapy experience. Ratio of 3 clock hrs a wk per qtr hr. Requires advance written perm of SHSS director and clinic coordinator.

437 Speech and Hearing Therapy in the Public Schools (2)

Prereq: eligibility for student teaching. Methods, organization and implementation to speech and hearing programs in public schools. Must be taken concurrently with student teaching.

472 Auditory Disorders in Children (3-4)

Prereq: 370, 371, 424. (winter, spring) Emphasis on identification audiometry and differential diagnosis of children with suspected auditory disorders.

498 Special Problems (3-5, max 12)

Prereq: written proposal and perm in qtr prior to registration. Not open to graduate students.

499 Independent Reading in Speech Pathology, Audiology and Speech Science (3-5, max 12)

Prereq: written proposal and perm in qtr prior to registration. Not open to graduate students.

HISTORY

The major requirement for the AB degree consists of a minimum of 48 hours, including Hist 101-102-103, 211-212-213 (unless excused as the result of taking a placement test) and 24 hours at the 300-400 level with at least two courses selected from each level. Beyond Hist 213 the following minimum hours are required: six hours in United States history, six hours in European history and six hours from the following fields — Ancient, Latin America, Africa, Middle East, Asia. Hist 101-102-103 should be taken during the freshman year and Hist 211-212-213 during the sophomore year. Courses in economics, geography, government and sociology are suggested as electives.

101 Western Civilization in Modern Times (4)

Renaissance to 1648: Renaissance, Reformation, origins of national state system, diplomacy and imperialism as applied to Portugal, Spain and Hapsburg Empires, and commercial and scientific revolutions. If possible 101-102-103 should be taken in sequence.

102 Western Civilization in Modern Times (4)

Continuation of 101. Covers 1648 to 1848: absolutism, constitutionalism, operation of coalition diplomacy and imperialism as applied to France and Britain; westernization of eastern Europe, enlightenment, French Revolution, agricultural, commercial and industrial revolutions and growth of ideologies—liberalism, socialism and nationalism. If possible 101-102-103 should be taken in sequence.

103 Western Civilization in Modern Times (4)

Continuation of 101-102. Covers 1848 to present: continued industrial revolution and spread of liberalism, socialism and nationalism; rise and fall of German bid for power in 2 world wars; new ideologies of materialism, positivism, Social Darwinism, irrationalism, totalitarianism; Russian and Chinese revolutions and international communism; rise and fall of western empires in Africa and Asia. If possible 101-102-103 should be taken in sequence.

111 The Origins of Western Civilization (4)

Birth of civilization in Near East, culture of Greece and Rome, coming of Christianity and medieval European states surveyed. Emphasis upon cultural contributions of these earlier societies to modern Western civilization.

211 History of the United States (4)

Political, diplomatic, social and economic development of American history. Covers 1607 to 1828: colonial America, founding of the new nation and early national period. If possible 211-212-213 should be taken in sequence.

212 History of the United States (4)

Continuation of 211. Political, diplomatic, social and economic developments of American history. Covers 1828 to 1900: Jacksonian democracy, territorial expansion, sectionalism and controversy, Civil War, reconstruction and impact of expanded Industrial Revolution. If possible 211-212-213 should be taken in sequence.

213 History of the United States (4)

Continuation of 211-212. Political, diplomatic, social and economic development of American history. Covers 1900 to present: progressive movement, WW I, prosperity and depression, WW II and problems of cold war era. If possible 211-212-213 should be taken in sequence.

H297 European History, Honors (4)

Prereq: admission to Honors College. Europe from 1848 to present.

H298 United States History, Honors (4)

Prereq: admission to Honors College. United States from 1607 to present.

315A History of the Black Man in America to 1860 (3)

M. Fletcher. Beginning with introduction of slavery in 1619, course deals with black man's role in America to the beginning of the Civil War. Concerns slavery, abolition and the many attempts by the black people to improve their position.

315B History of the Black Man in America Since 1860 (3)

Prereq: 315A or perm. *M. Fletcher.* Concerns Emancipation and its continuing effects on the black man in America. Life in the South, migration to the North and conservative and radical attempts by the black community to deal with these problems.

317A Ohio History to 1851 (3)

T. Smith. Ohio to 1851: prehistoric Ohio; early exploration, settlement, government; statehood and economic development. Formation of political parties, anti-slavery movement, constitutional change. Biographical sketches.

317B Ohio History Since 1851 (3)

T. Smith. Ohio since 1851; pre-Civil War politics, Civil War. Economic and political transition during post-Civil War. 20th century problems. Biographical sketches.

321A History of the Military in America: 1600 to 1898 (3)

M. Fletcher. Military institution in American history; role of technology in warfare; innovations and reforms in the military; war and its conduct; military and civilian society in war and peace.

321B History of the Military in America: 1898 to Present (3)

Prereq: 321A or perm. *M. Fletcher.* Continuation of 321A. See 321A for description.

323A Latin American Survey, Colonial Period (3)

J. Cunningham. Pre-Columbian civilization; conquest and colonization; evolution of institutions; wars for independence.

323B Latin American Survey, National Period (3)

J. Cunningham. Demolition of colonial order and struggle for nationality in the 19th century; 20th century reform, revolution and development of modern nation states.

325 Inter-American Relations (3)

J. Cunningham. Diplomatic history of Latin America since independence; state-to-state relations within Latin America; relations with the United States, western Europe and Communist nations; participation in world wars and in international organization.

329A Ancient History—Near Eastern Civilizations (3)

D. Richter. Prehistoric eras, origins of Mediterranean civilizations, problems of ancient chronology, civilizations of Sumerians, Babylonians, Egyptians, Assyrians, Biblical Hebrews and Persians. Stresses archaeological and literary sources, comparative social and religious concepts, acculturation, contributions to western civilization.

329B Ancient History—Hellenic Civilization (3)

D. Richter. Aegean prehistory, Minoan civilization, Mycenaean Greeks, Dorian invasions, Greek Renaissance, growth of the polis, Athenian society and culture, Persian and Peloponnesian Wars, political history of Greece to Alexander. Stresses archaeological sources, mythology and drama, Hellenic contributions to western civilization.

329C Ancient History—Roman Civilization (3)

D. Richter. Early peoples of Italy, Etruscans, constitutional development of the Republic, growth of the empire, the civil wars, history of the principate to Constantine. Stresses archaeological sources, Latin literature, Roman

life and institutions, Roman contributions to western civilization.

335A Survey of Islamic Civilization to 1800 (3)

G. Dorsee. Islamic history and civilization from rise of Islam to end of 18th century. Includes discussion of role of prophet Muhammad, doctrines and institutional system of Islam, medieval Islamic caliphates and their cultural achievements and contributions of Persians and Turks to Islamic civilization.

335B Survey of Middle East History Since 1800 (3)

G. Dorsee. History of Middle East since era of the French Revolution. Disintegration of the Ottoman Empire, emergence of the contemporary Middle East political system, impact of nationalism, secularism and industrialism on the region, and position of the Middle East in contemporary world affairs.

341A Africa to the 17th Century (3)

S. Miers. Africa in the ancient world; spread of agriculture and iron working; rise of Islam; migrations of peoples; development of states; arrival of the Europeans.

341B Africa from the 17th to the late 19th Century (3)

S. Miers. Africa in the 17th century; slave trade; religious revolutions in the western Sudan; development of African states; commercial revolution of the 19th century; birth of a plural society in South Africa; European partition of Africa.

341C Africa from the Late 19th Century to the Present Day (3)

S. Miers. Establishment of European rule in Africa; colonial period; rise of nationalism; decolonization and independence; problems of modern Africa.

345A Southeast Asia to 1820 (3)

J. Cady, N. Parmer. Southeast Asian peoples, economic life, institutions and cultures, including borrowings from India and China; origins, classical period, European commercial impact down to post-Napoleonic period.

345B Southeast Asia: 1820 to 1945 (3)

J. Cady, N. Parmer. Southeast Asia in the early 19th century, British-Indian commercial hegemony, development of imperialist rivalry, patterns of investment colonialism, its effects on Southeast Asian peoples, emergence of nationalist protests between world wars, Japanese conquest and occupation.

345C Post-War Southeast Asia: Independence Problems (3)

J. Cady, N. Parmer. Situation at the end of the war, achievement of independence, economic development and government problems, revolutions in Indochina, drift toward military rule in Thailand, Burma, South Vietnam, Indonesia, world orientation and America's role, regional prospects.

346A Traditional China to 1800 (3)

D. Jordan. Growth and interaction of principal political, social and economic institutions of China from prehistoric times through decline of Imperial system in the 1800's. Replaces 446A.

346B Modern China (3)

D. Jordan. Weakness of the Empire in the 1800's confronted by dynamic western economic and political imperialism; response to pressures of nationalism from without and from within; great flux in modern Chinese society and politics. Replaces 446B.

348A Traditional Japan (3)

D. Jordan. Development of Japan's early civilization, including indigenous elements and those derived from Korea and China. Political development of Japan leading to its position *vis-a-vis* the western nations in the 19th century. Replaces 448A.

348B Modern Japan (3)

D. Jordan. Political weakness of Tokugawa system leading to opening of Japan to western trade and restoration of the emperor; favorable economic and political base which allowed Japan to enter successfully into competitions with European nations; Japan's ultranational era and postwar reconstruction. Replaces 448B.

353A The Early Middle Ages (3)

Birth of the Middle Ages, 300-1100: collapse of ancient civilization, triumph of Christianity, coming of the dark ages and revival of Europe in 11th century.

353B The Later Middle Ages (3)

Prereq: 353A. Maturity and decadence of medieval world, 1100-1450: revival of trade, royal governments, Papal power, schools and learning in 12th and 13th centuries and collapse of this civilization in 14th and 15th centuries.

391A English History to 1688 (4)

R. Rauschenberg. For English and government majors as well as pre-law students and general students of history. Stresses institutional aspects of medieval England and social, political and constitutional developments in the Tudor and Stuart periods.

History

391B English History Since 1688 (4)

R. Rauschenberg. For English and government majors as well as pre-law students and general students of history. Emphasizes cultural and economic developments, growth of the British Empire, constitutional and social reforms and the impact of WW I and WW II.

400A Colonial America to 1689 (3)

Prereq: 211. *B. Steiner.* English background, establishment of settlements, first economies, evolution of political and religious structures, relations with England, internal conflicts, the Glorious Revolution.

400B Colonial America, 1689-1763 (3)

Prereq: 400A. *B. Steiner.* Governmental changes, credit and currency, Great Awakening, cultural developments, old colonial system, Anglo-French rivalry, nature of colonial society, problems of maturing political units.

400C Revolutionary Era, 1763-1783 (3)

Prereq: 9 hrs incl 211. *H. Stevens.* Causes of American Revolution and the struggle for independence.

401A Studies in Colonial American History (4)

Prereq: 24 hrs. *B. Steiner.* Literature and source materials of colonial American history. Readings and reports.

401B Studies of the Era of the American Revolution (4)

Prereq: 24 hrs. *H. Stevens.* Literature and source materials of American Revolution. Readings and reports.

404A Founding the American Republic: 1783-1800 (3)

Prereq: 9 hrs incl 211. *K. Keller.* Confederation, movement for new government, framing of Constitution and establishment of government during Washington's and Adams' terms.

404B Founding the American Republic: 1800-1819 (3)

Prereq: 9 hrs incl 211. *K. Keller.* Shaping of America's political, social and economic institutions, constitutional development and foreign policy under exponents of Jeffersonian democracy and rise of nationalistic spirit during War of 1812 and after.

404C The Old South (3)

Prereq: 9 hrs incl 211. Origins and growth of distinctive social, cultural and ideological patterns in the South with emphasis on 19th century prior to Civil War.

405 Studies in the Foundation of the American Republic, 1783-1819 (4)

Prereq: 24 hrs. *K. Keller.* Literature and source materials of early national period of American history. Readings and reports.

406A Sectional Controversy: 1820-1836 (3)

Prereq: 9 hrs incl 211. *H. Stevens.* Slavery and political controversy, rise of common man and problems and implications of Jacksonian democracy.

406B Sectional Controversy: 1836 to 1850 (3)

Prereq: 9 hrs incl 211-212. *H. Stevens.* Sectional tensions evolving from political controversy, economic conditions, slavery, territorial expansion and attempts to compose differences from 1836 to 1850.

407 Studies of the Era of Sectional Controversy, 1819-1850 (4)

Prereq: 24 hrs. *H. Stevens.* Literature and source materials of the era of sectional controversy, 1819-1850. Readings and reports.

408A Foundations of Modern America: The Civil War Era, 1850-1865 (3)

Prereq: 9 hrs incl 212. *R. Doolen.* Intensive examination of period from 1850 to conclusion of Civil War in 1865, with special reference to those forces making for increased sectionalism in 1850's; rise of new political movements and leaders; military engagements; society and institutions in both the North and the Confederacy during wartime.

408B Foundations of Modern America: Reconstruction and the New South after 1865 (3)

Prereq: 408A. *R. Doolen.* United States in years following Civil War; administrations of Andrew Johnson and Ulysses S. Grant, with special reference to reconstruction policies for the South and restoration of home rule in that region. Carries account of southern regional development to end of 19th century.

408C Foundations of Modern America: The Gilded Age, 1877-1901 (3)

Prereq: 9 hrs incl 212. *R. Doolen.* United States in late 19th century, with emphasis on roles of agrarian, labor and reform movements in an increasing industrial and urban society. Special note taken of role of political parties in Gilded Age.

409 Studies in the Era of the Foundations of Modern America, 1850-1901 (4)

Prereq: 24 hrs. *R. Doolen.* Literature and source materials for period 1850-1901 in United States history. Readings and reports.

410A The United States in Recent Times, 1900-1920 (3)

Prereq: 9 hrs incl 213. *A. Hamby, G. Lobdell.* Progressive era, American imperialism, WW I, rejection of Wilsonian liberalism.

410B The United States in Recent Times, 1920-1939 (3)

Prereq: 9 hrs incl 213. *A. Hamby, G. Lobdell.* Temper and culture of the 20's, Republican ascendancy and Democratic revival, Great Depression, F. D. Roosevelt and New Deal.

410C The United States in Recent Times, since 1939 (3)

Prereq: 9 hrs incl 213. *A. Hamby, G. Lobdell.* Abandonment of isolation, WW II, American politics in later Roosevelt years, cold war, Truman and Fair Deal, politics and problems of the 50's and 60's.

411 Studies in the History of the United States in Recent Times (4)

Prereq: 24 hrs. *A. Hamby, G. Lobdell.* Literature and source materials of recent United States history. Readings and reports.

412 History of the Industrial Revolution in the United States, 1850-1917 (3)

Prereq: 212-213. *R. Daniel.* Origins of factory system, impact of Civil War, rise of heavy industry, problems of financing and control, influence of progressive era.

414A Social and Cultural History of the United States, 1607-1820 (3)

Prereq: 211. *R. Daniel.* Role of minorities, class structure and religion in forming American society; development of American painting, architecture, music, literature, education and science as expressions of Puritanism, enlightenment and nationalism.

414B Social and Cultural History of the United States, 1820-1890 (3)

Prereq: 212. *R. Daniel.* Role of minorities, class structure and religion in forming American society; development of American painting, architecture, music, literature, education and science as expressions of romanticism, Social Darwinism and pragmatism.

414C Social and Cultural History of the United States, 1890 to Date (3)

Prereq: 213. *R. Daniel.* Role of minorities, class structure and religion in forming American society; development of American painting, architecture, music, literature, education and science as expressions of pragmatism and existentialism.

414D History of American Thought to 1815 (3)

C. Alexander. Major aspects of intellectual history of American colonies and the United States to 1815, organized around 2 major themes: Puritanism and secularization of American thought in the 18th century; also noting principal developments in American culture in colonial and early national periods.

414E History of American Thought, 1815-1890 (3)

C. Alexander. Major aspects of intellectual history of the United States, 1815-1890, stressing rise of romantic nationalism in social, political and cultural thought; triumph of democratic attitude; slavery controversy; impact of the Civil War and Darwinian evolution on American thought.

414F History of American Thought, 1890 to the Present (3)

C. Alexander. Major aspects of history of the United States since 1890, with principal attention given to continuing impact of evolutionary naturalism, especially in development of pragmatism; trends in liberal and conservative political ideologies; rise of pessimistic theology and its ramifications; development of modernistic attitude in the arts; role of science in social thought; variegated character of recent American thought.

415 Studies in the Social and Cultural History of the United States (4)

Prereq: 24 hrs. *R. Daniel.* Literature and source materials of social and cultural history of United States. Readings and reports.

416A History of United States Foreign Relations to 1898 (3)

Prereq: 9 hrs incl 212. *J. Gaddis.* United States foreign relations from war for independence to Spanish-American War, stressing development of traditional policies— isolationism, neutrality, Monroe Doctrine—and emergence of an American approach to foreign policy.

416B History of United States Foreign Relations, 1898-1939 (3)

Prereq: 9 hrs incl 213. *J. Gaddis.* American foreign relations from war with Spain to outbreak of WW II, emphasizing attempts to adjust traditional policies and attitudes to new conditions produced by changes in world power structure and rise of United States as a great power.

416C History of United States Foreign Relations since 1939 (3)

Prereq: 9 hrs incl 213. *J. Gaddis*. WW II and revolution in American foreign relations, cold war and containment, search for peace and security in a revolutionary era.

417 Studies in the History of American Foreign Relations (4)

Prereq: 24 hrs. *J. Gaddis*. Literature and source materials of American foreign relations. Readings and reports.

418A The Westward Movement: from the Atlantic Seaboard to the Mississippi (3)

Prereq: 211. *H. Stevens*. Expansion from first settlements on Atlantic seaboard to the Mississippi. Explorations, Indian trade, land policies, slavery, pioneer life, territorial development and state making.

418B The Westward Movement: Trans-Mississippi West (3)

Prereq: 212-213. *H. Stevens*. Territorial acquisitions, trails and exploration, Indian affairs, slavery, railroads, types of later frontiers and influence of the West upon American ideals and institutions.

420 History of the Middle West (3)

T. Smith. Development of political, economic and social institutions and attitudes characteristic of Ohio and the Middle West since 1787. Includes 20th century community relationships, problems and forms of behavior.

422 Latin America in the 19th Century (3)

Prereq: 9 hrs. *J. Cunningham*. Causes of wars for independence; institutional adjustments during and after wars; problems of regionalism and caudillism; influence of liberalism and positivism in shaping Latin American republics.

423 Studies in Latin American History, 1750-1880 (4)

Prereq: perm. *J. Cunningham*. Literature and source material of Latin American history, 1750-1880. Readings and reports.

426A Recent Latin America: Argentina, Brazil and Mexico in the 20th Century (3)

Prereq: 9 hrs. *J. Cunningham*. Reshaping and modernization of Mexico by revolution, and struggle to convert Argentine and Brazilian regionalisms, divided societies and resources into modern urban, integrated nations.

426B Recent Latin America: Andean Nations in the 20th Century (3)

Prereq: 9 hrs. *J. Cunningham*. Varied experience of the Andean republics under onset of modernization stressed.

426C Recent Latin America: Central America and the Island Republics in the 20th Century (3)

Prereq: 9 hrs. *J. Cunningham*. Search for national identity and modernization in area of special interest to United States. Consideration of alternative national solutions with special attention to Castro revolution and its historical background.

427 Studies in Recent Latin American History (4)

Prereq: perm. *J. Cunningham*. Literature and source materials of recent Latin American history. Readings and reports.

428 Greece in the 5th Century B.C. (3)

D. Richter. Political, social and cultural institutions of Greece in 5th century B.C. with special emphasis on city of Athens.

429 Studies in the History of Ancient Greece (4-8)

Prereq: perm. *D. Richter*. Literature and source material of ancient Greek civilization. Readings and research paper. Themes vary from qtr to qtr. May be repeated for credit.

435 Studies in Middle East History (4)

Prereq: 24 hrs. *G. Doxsee*. Literature and source materials on the Middle East since 1914. Readings and reports.

436A North Africa in Modern Times (3)

Prereq: 9 hrs. *G. Doxsee*. The Maghrib: its geography, ethnic composition and history since antiquity; French conquest of Algeria, Tunisia and Morocco; administrative systems; economic development; French-Muslim relations.

436B North Africa since 1914 (3)

Prereq: 9 hrs. *G. Doxsee*. Rise of nationalism; struggle for political independence; political, economic and social problems in independent North Africa.

438A History of East Africa (3)

Prereq: 9 hrs. *S. Miers*. History of East Africa from early times to present, with particular emphasis on period since 1750. Although neighboring countries also studied, greatest attention paid to region which comprises present day Kenya, Uganda and Tanzania.

441 Studies in African History (4)

Prereq: 24 hrs. *A. Booth, G. Dorsee*. Literature and source materials of African history. Readings and reports.

442A History of South Africa to 1899 (4)

A. Booth. Ancient man; Bantu migrations; coming of Europeans; conflict between Bantu, Boer and Briton; rise of Zulus and Wars of Calamity; rise of colonial tensions and origins of Boer War.

442B South Africa in Recent Times (4)

A. Booth. Boer War; Union of South Africa; rise of parties and Age of the Generals; WW I; industrial and social conflict; WW II; election of 1948 and emergence of Afrikaner nationalism.

444A History of Malaysia (3)

Prereq: two 300- or 400-level courses in social sciences or humanities dealing with Asia. *N. Parmer*. Political and cultural history of Malaysian or Indonesian peoples from 8th century A.D. through mid-20th century. Emphasizes indigenous values and institutions and how these have been modified or displaced by experience with imperialism and modernization.

444B Burma and Thailand in Modern Times (3)

Prereq: two 300- or 400-level courses in social sciences or humanities dealing with eastern Asia. *J. Cady*. Comparative study of neighboring Buddhist states, covering selected aspects of their history. Emphasizes political and cultural tradition, their interrelations, impact of colonial period and problems of post-war modernization.

444C History of Vietnam (3)

Prereq: two 300- or 400-level courses in social sciences or humanities dealing with eastern Asia. *J. Cady*. Assesses heritage of 1000 yrs of Chinese rule and covers development of Vietnamese state from 10th to 19th century, missionary and French colonial impact and problems of independence since 1945.

444D Chinese in Southeast Asia (3)

Prereq: two 300- or 400-level courses in social sciences or humanities dealing with Asia. *D. Jordan*. Historical role of this potent immigrant community in the setting of Southeast Asian countries. China's imperial interests in the area, tribute system, relationships between overseas Chinese, European colonialists and indigenous peoples and role of Chinese communities in contemporary Southeast Asian politics.

445 Studies in the History of Southeast Asia (4)

Prereq: two 300- or 400-level courses in social sciences or humanities dealing with Asia. *J. Cady, N. Parmer*. Literature of Southeast Asian history and culture generally, with particular emphasis on selected developments in the 19th and 20th centuries. Readings and reports.

449 Studies in the History of East Asia in Modern Times (4)

Prereq: perm. *D. Jordan*. Historical literature relating to process of modernization of China and Japan from 1860's to 1960's. Readings and reports.

452 Medieval Civilization (4)

Prereq: 9 hrs. Transmission of Christianity and classical culture to the barbarians and their work of combining the 2 into a new civilization in the early Middle Ages. Medieval civilization at its height: the Church, the schools and scholastic thought and secular culture.

456A The Italian Renaissance (3)

Prereq: 101. *P. Bebb*. Renaissance in Italy from rise of Italian city-states to invasions of early 16th century.

456B The Northern Renaissance (3)

Prereq: 101. *P. Bebb*. Age of the Renaissance in northern Europe, including France, England, Spain, Germany and the Netherlands.

456C The Reformation (3)

Prereq: 101. *P. Bebb*. Protestant and Catholic reformations in Europe.

458A Early Modern Europe, 1559-1648 (3)

Prereq: 101. *D. Baxter*. Europe from 1559 to 1648. Main political, economic and cultural developments in Europe during Age of Spanish Preponderance: Philip II, wars of religion, Richelieu, Thirty Years' War and ideological struggles.

458B Early Modern Europe, 1648-1715 (3)

Prereq: 101-102. *D. Baxter*. Europe from 1648 to 1715. Main political, economic and cultural developments in Europe during Age of Louis XIV: French hegemony, rise of balance of power, absolutism, intellectual revolution and Pre-Enlightenment.

458C Early Modern Europe, 1715-1774 (3)

Prereq: 101-102. *D. Baxter*. Europe from 1715-1774. Main political, economic and cultural developments in Europe during Age of Louis XV: despotism, diplomatic revolution, competition for empire, science and learning.

461 Proseminar in French Revolution (4)

Prereq: 24 hrs. *C. Gustavson*. Intensive study of such historical factors as causality, influence of ideology, institutional organization and role of the individual in a great upheaval.

462A Europe, 1814-1871 (3)

Prereq: 103. *L. McGeoch*. Europe from Congress of Vienna through the Franco-Prussian War, including growth of liberalism and nationalism, revolutions of 1830 and 1848, Industrial Revolution, unification of Italy and Germany, social and intellectual movements.

462B Europe, 1871-1914 (3)

Prereq: 103. *L. McGeoch*. Development of Austria-Hungary, France, Italy, Germany, Great Britain and Russia, including imperialism, background of WW I and social and intellectual movements.

463 Studies in 19th Century Europe (4)

Prereq: 24 hrs. *L. McGeoch*. Literature and source material of 19th century Europe. Readings and reports.

464A Europe Between World Wars (3)

Prereq: 103. *R. Whealey*. Fascism, Communism and the Twenty-Year Armistice between 1919 and 1939.

464B Contemporary Europe (3)

Prereq: 103. *C. Gustavson*. Cold War in Europe, Communist bloc, movement toward European integration, Gaullist regime and major developments on national level.

466A Modern France in the 19th Century (3)

Prereq: 103. *J. Chastain*. Evolution of France as a monarchy, empire and republic.

466B Modern France in the 20th Century (3)

Prereq: 103. *J. Chastain*. France under three republics.

467 Studies in Modern France (4)

Prereq: 24 hrs. *J. Chastain*. Literature and source material of modern France. Readings and reports.

468A Modern Germany in the 19th Century (3)

Prereq: 102 or 103. *J. Chastain, C. Gustavson*. Germany and central Europe from Age of Napoleon to fall of Bismarck.

468B Modern Germany in the 20th Century (3)

Prereq: 103. *J. Chastain*. Germany and central Europe since advent of Wilhelm II.

470 History of the Byzantine Empire, 324-1453 (3)

W. Kaldis. Decay of the Roman World and emergence of a Christian empire, 324-717; medieval Roman Empire, 717-1056; weakening of central administration and apparent revival under the Comneni, 1025-1204; Byzantium and the neighboring world, 1204-1453; church and state; education and learning; Byzantine art; social, political and military developments.

472A Balkans in Early Modern Period, 1453-1804 (3)

W. Kaldis. Ethnographic structure of Balkan peoples under rule of Ottoman Empire. Ottoman institutions and society; political, social, economic, religious and cultural developments in the Balkans in 15th, 16th, 17th and 18th centuries.

472B Balkans in 19th Century, 1804-1878 (3)

W. Kaldis. Evolution of modern Balkan nationalism and rise of Balkan states. Ottoman dissolution and Balkan revolutionary nationalism; political, social, economic, religious and intellectual developments; domestic Balkan policy and foreign intervention.

472C Balkans in 20th Century, 1878 to Present (3)

W. Kaldis. Historical, cultural and ethnic background of Balkan peoples. Social, economic, political and intellectual developments in the Balkans; communization of Southeast European states.

474A History of European Diplomacy, 1814-1914 (3)

Prereq: 103. *L. McGeoch*. Diplomatic history from Congress of Vienna to WW I, including age of Metternich, Italian and German unification, new imperialism and prewar alliance and alignments.

474B History of International Diplomacy, 1914-1939 (3)

Prereq: 103. *R. Whealey*. International problems of peace and war, international organization and alliances.

474C History of International Diplomacy, 1939 to Present (3)

Prereq: 103. *R. Whealey*. International problems of peace and war on a world wide scale since 1939, international organization and alliances, adjustment to collapse of European imperialism.

476B Economic History of Europe, 1760-1914 (3)

Prereq: 101. European economic development from the Middle Ages to the time of Adam Smith, including: medieval background, expansion of Europe, mercantilism and early growth of capitalism.

476B Economic History of Europe, 1760-1914 (3)

Prereq: 101-102. Industrial, commercial, agricultural and financial development in Europe from mechanization of industry to WW I.

476C Economic History of Europe since 1914 (3)

Prereq: 103. European economic development in war and peace from 1914 to present.

482A History of Russia (3)

Prereq: 9 hrs. *C. Gustavson*. Russia from earliest times to 1881. Kievan Russia, Muscovy, emergence of tsarist Russia, territorial expansion and role as a great power in Europe and Asia.

482B The Communist Revolution (3)

Prereq: 9 hrs incl 103. *C. Gustavson*. From tsarist Russia to Soviet Union, 1881-1924; background for the revolution, Bolshevik seizure of power and consolidation of dictatorship.

482C Soviet Union (3)

Prereq: 9 hrs incl 103 and 482B. *C. Gustavson*. Soviet Union since the death of Lenin (1924) with emphasis on internal affairs of Communist regime.

483 Studies in Russian and Soviet History (4)

Prereq: 24 hrs. *C. Gustavson*. Literature and source material of Russian and Soviet history. Readings and reports.

489 Later Medieval England, 1307-1485 (3)

Prereq: 9 hrs or 391A. *C. Reeves*. Investigation of political, social, intellectual, ecclesiastical and economic aspects of a period of ferment and rapid change.

490A Tudor England (3)

Prereq: 9 hrs incl 101 or 391A. *R. Harvey*. England in the 16th century: Tudor absolutism, English Reformation and major cultural and economic developments of Shakespeare's England.

490B Stuart England (3)

Prereq: 9 hrs incl 101 or 391A. *R. Harvey*. England in 17th century: constitutional crisis

of Stuart period, Republican experiment under Cromwell and major cultural and economic developments.

491 Studies in Early Modern English History (4)

Prereq: 24 hrs plus perm. *R. Harvey*. Studies in early modern English history from multidisciplinary perspectives.

492A The United Kingdom in the 18th Century (3)

Prereq: 9 hrs incl 102 or 391B. *R. Rauschenberg*. Intensive study of political, social, intellectual, cultural and economic developments of England in years prior to and during American and French revolutions.

492B The United Kingdom in the 19th Century (3)

Prereq: 9 hrs incl 103 or 391B. *R. Rauschenberg*, *D. Richter*. Intensive study of Britain's history in the 19th century including examination of major political, cultural and economic trends.

492C The United Kingdom in the 20th Century (3)

Prereq: 9 hrs incl 103 or 391B. *R. Rauschenberg*. Intensive study of British history in the 20th century concentrating on political, cultural and economic developments.

493 Studies in British History since 1714 (4)

Prereq: 24 hrs. *R. Rauschenberg*. Literature and source material of British history since 1714. Readings and reports.

494A The Medieval English Constitution (4)

Prereq: 12 hrs. English government from Anglo-Saxon times to end of Middle Ages. Growth of machinery of monarchy, central administration, courts and common law. Rise of Parliament.

494B The Modern English Constitution (4)

Prereq: 102-103 or 391B. *R. Harvey*. Emergence of modern English constitution during 16th and 17th centuries: creation and growth of Tudor Constitution; significance of English Reformation for constitution; Tudor Parliament; "Century of Revolution" (1603-1689) and crisis of Constitution; problems of sovereignty and obligation; constitution today.

496A The British Empire-Commonwealth: Georgian Era (3)

Prereq: 102 or 391B. British Empire from 18th century to Age of Reform, surveying formulation of colonial policy, growth of the empire and internal development of the parts.

**496B The British Empire-Commonwealth:
Victorian Era (3)**

Prereq: 102 or 391B. British Empire from Age of Reform to WW I, surveying formulation of colonial policy, growth of the empire and internal development of the parts.

**496C The British Empire-Commonwealth:
the 20th Century (3)**

Prereq: 103 or 391B. Evolution of empire into commonwealth during present century; factors involved in this process and historical development of its parts.

498 Problems in History (1-5, max 9)

Prereq: 24 hrs, perm. Intensive individual work either in research or individual systematic reading along lines of student's special interest and under supervision of staff member.

**499 Honors Studies of Selected Historical
Topics (1-5, max 15)**

Prereq: perm. Study, reading, research and writing on a selected topic for honors work in history.

HOME ECONOMICS

General Home Economics

Child Development and Family Life Education

Foods and Nutrition

Home Economics Education

Home Economics Programs For International Students

Housing, Furnishings And Management

Textiles and Clothing

General Home Economics

101 Orientation in Home Economics (2)

S. Slater. Home economics with emphasis on career opportunities in various areas. Specialists in each field assist staff.

319 Home Nursing and Family Health (2)

Simple procedures in care of the sick and minor accidents in the home. Disease prevention and health promotion for family.

399A Field Work in Home Economics (2-5)

Prereq: 18 hrs, sr rank. (summer) On-the-job training through cooperation with business organizations, department stores, hospitals, radio-television stations, Home Economics Extension Department of Ohio State University and the Merrill-Palmer Institute. Each section may be taken only once. 399A—home economics extension.

399B Field Work in Home Economics (2-5)

Prereq: 18 hrs, sr rank. (summer) Part of series beginning with 399A. See 399A for general description. 399B—home service work with public utilities.

399C Field Work in Home Economics (2-5)

Prereq: 18 hrs, sr rank. (summer) Part of series beginning with 399A. See 399A for general description. 399C—food service management.

399D Field Work in Home Economics (2-5)

Prereq: 18 hrs, sr rank. (summer) Part of series beginning with 399A. See 399A for general description. 399D—retail merchandising.

399E Field Work in Home Economics (2-5)

Prereq: 18 hrs, sr rank. (summer) Part of series beginning with 399A. See 399A for general description. 399E—radio-television.

399F Field Work in Home Economics (2-5)

Prereq: 18 hrs, sr rank. (summer) Part of series beginning with 399A. See 399A for general description. 399F—child and family development.

479A Workshop in Home Economics (2-6)

Prereq: teaching experience or perm. (summer) Special workshops for in-service training of home economics teachers. Each section may be taken only once. 479A—home economics education.

479B Workshop in Home Economics (2-6)

Prereq: teaching experience or perm. (summer) Continuation of series beginning with 479A. See 479A for general description. 479B—clothing and textiles.

479C Workshop in Home Economics (2-6)

Prereq: teaching experience or perm. (summer) Continuation of series beginning with 479A. See 479A for general description. 479C—foods and nutrition.

479D Workshop in Home Economics (2-6)

Prereq: teaching experience or perm. (summer) Continuation of series beginning with 479A. See 479A for general description. 479D—child development.

479E Workshop in Home Economics (2-6)
Prereq: teaching experience or perm. (summer) Continuation of series beginning with 479A. See 479A for general description. 479E—consumer economics.

479F Workshop in Home Economics (2-6)
Prereq: teaching experience or perm. (summer) Continuation of series beginning with 479A. See 479A for general description. 479F—home furnishings.

479G Workshop in Home Economics (2-6)
Prereq: teaching experience or perm. (summer) Continuation of series beginning with 479A. See 479A for general description. 479G—home management.

479H Workshop in Home Economics (2-6)
Prereq: teaching experience or perm. (summer) Continuation of series beginning with 479A. See 479A for general description. 479H—household equipment.

479I Workshop in Home Economics (2-6)
Prereq: teaching experience or perm. (summer) Continuation of series beginning with 479A. See 479A for general description. 479I—school lunch management.

479J Workshop in Home Economics (2-6)
Prereq: teaching experience or perm. (summer) Continuation of series beginning with 479A. See 479A for general description. 479J—family life education.

491A Seminar in Home Economics (2-4)
Prereq: perm by dept chairman. Recent developments in any of the following areas. Each section may be taken only once. 491A—child development and family life.

491B Seminar in Home Economics (2-4)
Prereq: perm of dept chairman. Continuation of series beginning with 491A. See 491A for general description. 491B—foods and nutrition.

491C Seminar in Home Economics (2-4)
Prereq: perm of dept chairman. Continuation of series beginning with 491A. See 491A for general description. 491C—home economics education.

491D Seminar in Home Economics (2-4)
Prereq: perm of dept chairman. Continuation of series beginning with 491A. See 491A for general description. 491D—housing and management.

491E Seminar in Home Economics (2-4)
Prereq: perm of dept chairman. Continuation of series beginning with 491A. See 491A for

general description. 491E—textiles and clothing.

491F Seminar in Home Economics (2-4)
Prereq: perm of dept chairman. Continuation of series beginning with 491A. See 491A for general description. 491F—research.

Child Development and Family Life Education

160 Introduction to Child Development (4)
L. Nudd, A. Lockard. Fundamental patterns of development and behavior during prenatal period through adolescence. Directed observations of children in nursery school setting by closed circuit television, infants in infant lab and youth in selected adult-child community activities. 4 lec, 1 lab.

270 Family Living (3)
M. Rogers, E. Stricklin. Person-centered analysis of basic human relationship processes leading to a successful modern American marriage and family experience. Special discussion and analysis of problems in the beginning family stage. Not open to fr. 3 lec.

361 Principles of Preschool Guidance (4)
Prereq: 160 or equiv, perm. *J. Nehls.* Application of theories and principles of preschool guidance by directed observation of adult-child interactions, and supervised participation in nursery school. 2 lec, 3 lab.

363 Creative Experiences with Preschool Children (4)
Prereq: 361, perm. (fall, winter) *A. Lockhard, J. Nehls.* Evaluation of materials and activities for use in directing and stimulating creativity in children by means of supervised observation and planned experience in nursery school and/or other preschool settings. 3 lec, 3 lab.

371 Family Development (3)
Prereq: 5 hrs general psychology. *E. Stricklin.* Modern family and its relationships beginning at marriage and continuing through subsequent phases of family life cycle. 3 lec.

462 Readings in Child Development and/or Family Living (3-6, max 6)
Prereq: 160 or equiv, 15 hrs sociology and/or psychology. Basic research, theory writings, current controversies and trends relevant to growth and behavior of children and in family living. Experience in abstracting materials from current sources. 2-4 lec.

463 Preschool Administration (5)

Prereq: 363. (spring) *J. Nehls*. History, philosophy and objectives of preschool education including current trends. Problems in organizing and administering preschools, play groups and Head Start programs with emphasis on housing, staff, schedules and financing. Field trips to selected programs. 4 lec.

464 Nursery School Practicum (6)

Prereq: 363, perm. *J. Nehls*. Lab experience in planning, guiding, supervising and evaluating preschool children's growth and behavior in all phases of a nursery school program. 1 lec, 20 labs.

470 Family Living (3)

M. Rogers, E. Stricklin. Person-centered analysis of basic human relationship processes leading to successful modern American marriage and family experience. Special discussion and analysis of problems in the beginning family stage. No credit for those who have had 270. 3 lec.

471 Family Life Education (4)

Prereq: perm. (winter, summer) *E. Stricklin*. History, philosophy and objectives of family life education, including current trends. Selected fundamental educational problems explored. Examination of various dimensions of teacher's role and critical appraisal of student's professional competency to teach classes in family life education.

Foods and Nutrition

122 Food Science and Principles (4)

M. Lewis, A. Wade. Scientific principles applied to selection, storage and preparation of foods. 3 lec, 2 lab.

128 Introduction to Nutrition (3)

D. Thompson, A. Wade. Relation of foods and nutrition to growth, development and maintenance of health. Development of good food habits for children and adults.

320 Meal Management (3)

Prereq: 122, 128. *M. Lewis, A. Wade*. Principles of food preparation and nutrition emphasizing use of time, energy and resources in management of meals. 2 lec, 3 lab.

321 Creative Cookery and Food Styling (3)

Prereq: 320, 3 hrs of psychology and 3 hrs of art. (fall) *M. Lewis*. Intensive study of elements of color, design, flavor and texture of food products and styles of cookery. 2 lec, 2 lab.

422 Experimental Foods (4)

Prereq: 122 or equiv and organic chemistry. (winter) *M. Lewis*. Factors which affect results obtained from food processes. Experimental work under controlled conditions. 2 lec, 3 lab.

423 Comparative Studies in Foods (4)

Prereq: 320, bacteriology and economics. (winter, spring) *M. Lewis*. Food preservation, factors affecting palatability and nutritive value of foods, taste panels, preference surveys, elements of the food industry. 2 lec, 3 lab.

425 Teaching of Foods and Nutrition (3)

Prereq: sr rank and perm. (fall) *M. Lewis*. Organization of materials and methods of presenting principles of food preparation and nutrition. For majors in foods and nutrition. 1 lec, 4 lab.

426 Cultural and Nutritional Aspects of Food (3)

Prereq: 122, 128. (fall, spring) *A. Wade*. Food patterns and practices of various cultural groups. Evaluation of these patterns in meeting dietary needs and factors contributing to these patterns.

427 Studies in Foods and Nutrition (3-4, max 8)

Prereq: perm. Directed studies in some aspect of foods and/or nutrition; topics selected by students with approval of staff member, frequent conferences.

428 Advanced Nutrition (4)

Prereq: 122, 128, organic chemistry and physiology. (fall) *D. Thompson*. Nutrition and evaluation of current research as applied to dietary practices for all age groups. Computation of nutritive values of dietaries. 2 lec, 4 lab.

429 Community Nutrition (3)

Prereq: 128, psychology and sociology. (spring) *D. Thompson*. Nutrition needs and practices in agencies serving community such as Social Welfare, Home Economics Extension, Public Health and School Lunch. Nutrition work with low-income families. Involves some field work. 2 lec, 2 lab.

430 Diet Therapy (4)

Prereq: 428, biochemistry. (winter) *D. Thompson*. Principles of nutrition in feeding of individuals and use of diet in prevention and treatment of disease. Problems in planning and preparing therapeutic diets. 3 lec, 1 lab.

431 Studies of Science of Nutrition
(3-4, max 8)

Prereq: 428 and Zool 363. Nutrition as related to physiological and metabolic processes. Review and critical analysis of research in the field. 2 lec, 3 lab.

432 Infant and Child Nutrition (3)

Prereq: 128, 160 or equiv. (fall) Dietary factors related to nutritional status in pregnancy, infancy, preschool and school-age children. Contribution of nutrition education and school lunch program in school curriculum. 2 lec, 2 lab.

434 Food Production and Service (4)

Prereq: 122, 128. (fall, winter) *R. Macauley*. Food preparation principles of quantity food production and service. Experience in residence halls. 2 lec, 4 lab.

435 Purchasing and Cost Control (4)

Prereq: 434, Acct 101, perm. (spring) *R. Macauley*. Production, distribution and storage of food supplies to serve as basis for purchase of such commodities for quantity use including cost control systems. 2 lec, 4 lab.

436 Equipment Maintenance and Layout (4)

Prereq: 434. (fall) *R. Macauley*. Food service layout and selection of equipment and furnishings, including materials, construction installation, operation, care and relative cost. 3 lec, 2 lab.

437 Organization and Management (3)

Prereq: 434. (winter) *R. Macauley*. Organization and administration of food service operations in public and private institutions. Administration of labor and standards of work. 3 lec.

**438 Advanced Food Production
Management (2-4)**

Prereq: 437 or equiv, sr rank, perm. (spring) *R. Macauley*. Individual studies and laboratory experiences in management of personnel and cost control procedures. Course may be taken only once.

Home Economics Education

340 Teaching of Home Economics (3)

Prereq: jr rank. *S. Slater*. Home economics programs at jr and sr high school level. Special emphasis given to vocational education, curriculum development and evaluation procedures.

341 Demonstration Techniques (3)

Prereq: 18 hrs. *M. Lewis*. Practical experience in demonstration of foods, equipment or clothing. Planned for those in secondary education or consumer service. 1 lec, 4 lab.

440 Seminar in Home Economics Education
(3)

Prereq: 24 hrs of home economics and 9 hrs of education. *B. Sellers, S. Slater*. Emphasis given to classroom management, professional responsibilities and specific techniques used for teaching job-training programs.

441 Methods in Home Economics Extension
(3)

Prereq: 24 hrs of home economics and 9 hrs of education. (summer) *E. Langford*. History and philosophy of home economics extension; principles and procedures of instruction; organization and evaluation of programs.

442 Home Economics Education Practicum
(2-4, max 8)

Prereq: sr rank. *S. Slater*. Concentrated study in an area of interest such as adult programs, special education programs, job training experience; work with handicapped people.

443 Vocational Home Economics (4)

Prereq: 340 or teaching experience in home economics. (summer) *B. Sellers, S. Slater*. History and philosophy of vocational home-making education. Contemporary trends, methods, sources of materials and evaluation. Observation arranged.

444 Home Economics in Adult Education
(4)

Prereq: 26 hrs. (winter, summer) *B. Sellers*. Organization procedures, curriculum materials and methods of conducting adult education groups in field of education for family living.

**445 Current Developments in Home
Economics Education (4)**

Prereq: 340 or 443. (summer) *B. Sellers*. Current trends and developments in home economics education programs at secondary and post high school levels in relation to curricular developments, evaluation procedures, legislation affecting program and research.

450 Problems in Teaching Home Economics
(2-4, max 6)

Prereq: 26 hrs and EdPl 463, 464. *B. Sellers, S. Slater*. Individual problems in teaching.

Home Economics Programs for International Students

459A Home Economics Seminar, Workshop and Short Course in International Service (2-4)

Prereq: jr rank, perm. Special seminars or workshops for international students or for home economics majors who want to prepare for international service. Lec, lab and field trips. Each section may be taken only once. 459A—world food supply and human nutrition.

459B Home Economics Seminar, Workshop or Short Course in International Service (2-4)

Prereq: jr rank, perm. Continuation of series beginning with 459A. See 459A for general description. 459B—sanitation and health problems.

459C Home Economics Seminar, Workshop or Short Course in International Service (2-4)

Prereq: jr rank, perm. Continuation of series beginning with 459A. See 459A for general description. 459C—cultural, religious and social influences on family life.

459D Home Economics Seminar, Workshop or Short Course in International Service (2-4)

Prereq: jr rank, perm. Continuation of series beginning with 459A. See 459A for general description. 459D—cultural, religious and social influences on food patterns and nutrition.

459E Home Economics Seminar, Workshop or Short Course in International Service (2-4)

Prereq: jr rank, perm. Continuation of series beginning with 459A. See 459A for general description. 459E—working with low-income and disadvantaged families.

459F Home Economics Seminar, Workshop or Short Course in International Ser- vice (2-4)

Prereq: jr rank, perm. Continuation of series beginning with 459A. See 459A for general description. 459F—home and community development, including home management.

459G Home Economics Seminar, Workshop or Short Course in International Service (2-4)

Prereq: jr rank, perm. Continuation of series beginning with 459A. See 459A for general description. 459G—infant and child care services.

459H Home Economics Seminar, Workshop or Short Course in International Service (2-4)

Prereq: jr rank, perm. Continuation of series beginning with 459A. See 459A for general description. 459H—establishing home economics extension and other adult programs in developing countries.

459I Home Economics Seminar, Workshop or Short Course in International Service (2-4)

Prereq: jr rank, perm. Continuation of series beginning with 459A. See 459A for general description. 459I—curriculum studies and evaluation of international home economics programs at the elementary and secondary level.

459J Home Economics Seminar, Workshop or Short Course in International Service (2-4)

Prereq: jr rank, perm. Continuation of series beginning with 459A. See 459A for general description. 459J—curriculum studies and evaluation of international home economics programs and research in higher education.

Housing, Furnishings and Management

180 Furnishing Today's Home (3)

E. Langford, J. Matthews. Practical and esthetic study of home furnishings, including basic art qualities, studies in color and design, materials used in furnishings, selection and arrangement of furniture and accessories.

384 Family Housing (3)

Prereq: 180 and art or design. (fall, winter) *E. Langford.* Housing needs of family and factors influencing housing. Evaluation and designing of floor plans for effective use of space in home.

385 Home Furnishings Workshop (4)

Prereq: 112, 180 or 6 hrs art, perm. *E. Langford.* Lab problems in advanced techniques in home furnishings, including upholstering, slip-covering, refinishing furniture.

390 Family Consumer Economics (3)

R. Macauley. Management of personal and family financial problems. Retailing activities as they affect role of consumer. 3 lec.

391 Household Equipment (4)

Prereq: 122, 390. (fall, spring) *R. Macauley.* Selection and use of household equipment in-

cluding materials, construction, operation and care. 4 lec, 2 lab.

395 Home Management (3)

Prereq: 9 hrs psychology, sociology and/or economics, jr rank. *M. Rogers*. Decision-making applied to use of family resources with purpose of creating a family environment in which optimum human development will occur. 3 lec.

396 Home Management Laboratory (4)

Prereq: 395 or with 395, perm. *M. Rogers*. Principles of decision-making and management in a group living situation. Home Management House experience provided.

439 Studies in Household Equipment and/or Management (2-4, max 6)

Prereq: 391, 395. Provides opportunity for student to pursue study in a selected area of home management and/or household equipment, under supervision.

480 Advanced Home Furnishings (3)

Prereq: 180 and art or design, perm. (winter) *E. Langford*. Qualities and styles of furniture and furnishings. Emphasis on periods of the past and their esthetic influence on the present. Practical projects in decorating and furnishing a home.

481 Contemporary Design in Furnishings (3)

Prereq: 480, 6 hrs of art or perm. (spring) *E. Langford*. Furnishings and interiors of present era; factors that have influenced development of contemporary design; important designers and their work.

482 Design in Home Accessories (3)

Prereq: 480, 6 hrs of art or perm. (spring) *J. Matthews*. Esthetic development of design in accessories of glass, ceramics, textiles, Oriental rugs, metals such as silver and pewter. Use of accessories in home and in displays.

492 Household Equipment Techniques (3)

Prereq: 391. *R. Macauley*. Critical analysis of home equipment relative to durability and effective use. 1 lec, 4 lab.

Textiles and Clothing

110 Theory of Clothing Construction (2)

E. Goldsberry. Scientific principles as applied to understanding and use of commercial pattern, to pattern alterations and to cutting and layout problems. 2 lec, labs as assigned.

112 Principles of Clothing Construction (3)

Prereq: 110. *M. Graham*. Fundamental principles of clothing construction to individual projects. Emphasis on scientific thought, creative expression and construction techniques. 1 lec, 5 lab.

308 Advanced Clothing Construction (4)

Prereq: 112, 315. *E. Goldsberry, N. Karhoff*. Advanced problems and techniques of clothing construction. Creative expression through selection of individual projects. 2 lec, 4 lab.

312 Studies in Clothing and Textiles (2-4, max 8)

Prereq: perm. Selected topic in clothing and textiles.

314 Fashion Merchandising (4)

Prereq: 112, 315, Jour 250. (fall) *E. Goldsberry*. Factors which influence merchandising of fashion goods. Process involved in planning, promoting, controlling, buying and selling fashion merchandise. 4 lec.

315 Elementary Textiles (4)

M. Doxsee, M. Graham. Emphasis on textile yarns, fabrics and finishes with reference to production, processing use and care. 4 lec, 1 lab.

317 Textiles and Dress in Modern Living (3)

Prereq: Psy 101 or Soc 101. *N. Karhoff*. Contemporary uses and roles of textiles and clothing as affected by economics, social and psychological forces seen in historic perspective.

402 Flat Pattern (4)

Prereq: 112 and 315. *E. Goldsberry*. Flat pattern designing with emphasis on fitting techniques and use and understanding of commercial patterns. 2 lec, 4 lab.

405 History of Costume and Textiles (3)

Prereq: 112 and 315. (fall) *M. Doxsee, M. Graham*. Costume and textiles through the ages as reflection of historical period and source for present day design.

407 Textile and Fashion Industry (5)

Prereq: 315 and Jour 250. (spring) *M. Doxsee*. Economic factors influencing textile and fashion industry treated in depth. 5 lec.

419 Advanced Textiles (5)

Prereq: 315, Chem 121, perm. (winter) *M. Doxsee*. Standard textile testing procedures and research methods. Student conducts individual research problem in lab.

INDONESIAN

See Linguistics

INDUSTRIAL DESIGN

See Design, Industrial

INDUSTRIAL TECHNOLOGY

The requirements for an industrial arts major in the program leading to a BS in education degree are outlined in the College of Education section of the catalog. The program outline for a BS in industrial technology degree is described in the College of Engineering and Technology section. A teaching option is available under industrial technology.

80 Driver Education (2)

For novice drivers. Credit and points not counted toward degree. 2 lec, 2 lab. Fee: \$15.

109 Crafts (2)

Working with leather, art metal, enameling and plastics. Open to any student in the University. 4 lab.

115 Metal Fabrication (4)

Production practice, including cutting, forming and joining of metals. 1 lec, 6 lab.

117 Engineering Metals (3)

Prereq: engineering major. Practice directed toward learning capability of various metal cutting, forming and joining machines. 6 lab.

216 Metal Machining (2)

Prereq: EG 101. Operation of cutting, grinding and electrical discharge machines, with emphasis on factors affecting quality control during production. 1 lec, 6 lab.

220 Small Engines (3)

Assembly, adjustment and gauging procedures, as applied to small 2-cycle and 4-cycle gasoline engines. 1 lec, 4 lab.

244 Graphic Processes (3)

Prereq: EG 102. Production methods applied to letterpress, offset and screen process printing. 2 lec, 6 lab.

250 Wood Industry (5)

Prereq: EG 101. Woodworking procedures and technology, including machine operation. 2 lec, 6 lab.

260 Line Supervision (3)

Prereq: 115. Working relationships between personnel involved in production areas of manufacturing considered, including qualifications and characteristics expected for various positions. Case studies provide examples of typical positions and responsibilities available to graduates in industrial technology. 3 lec.

270 Report Writing (3)

Practice toward illustration of reporting style and format within subsequent departmental classes. 1 lec.

301 Ceramic Production (3)

Prereq: Chem 121. Ceramic materials, with emphasis on production processes. 1 lec, 4 lab.

302 Vitreous Materials (2)

Prereq: 301. Application of industrial ceramic products to problems associated with manufacturing. 4 lab.

308 Plastics (3)

Prereq: 250, Chem 122. Applications involving typical materials and forming techniques in production of plastic objects. 1 lec, 4 lab.

310 Metal Casting (3)

Prereq: 250, Chem 122. Foundry practice extending from pattern design through production of finished casting. 1 lec, 4 lab.

311 Welding (2)

Prereq: 115, 216. Varied types of welds, using arc, shielded arc, oxy-acetylene and spot welders. Analysis of results based upon testing. 4 lab.

312 Metals Production (3)

Prereq: 216, Mgt 310. Advanced practice of machining techniques organized to illustrate applications of quantity and quality control. 1 lec, 4 lab.

318 Numerical Control (3)

Prereq: 117 or 216. Metal machining extending from planning of work program through production of finished article. 2 lec, 2 lab.

320 Hydraulic Controls (3)

Prereq: Phys 201. Application of hydraulic principles to common industrial utilizations for power transmission and mechanism control. Emphasis on study of hardware and circuitry. 1 lec, 4 lab.

321 Pneumatic Circuits (3)

Prereq: 320. Components and circuits utilizing compressed air for power and control systems. 1 lec, 4 lab.

323 Automotive Theory (5)

Prereq: 220. Adjustments affecting performance and overhaul procedures. Dynamometer testing of performance characteristics. 2 lec, 6 lab.

332 Electronics (5)

Prereq: Phys 202. Experimental activity to develop proficiency in utilizing test instruments; learning characteristics of components commonly employed in simple circuits. 2 lec, 6 lab.

333 Semi-Conductors (3)

Prereq: 332. Experimental activity revealing performance characteristics of typical components and their functions in basic circuits. 1 lec, 4 lab.

336 Bioelectronics (3)

Prereq: Phys 202. Lab course for biological science majors. Electronic principles and circuits, equipment operation and component selection. Emphasis on measurement and instrumentation. 6 lab.

341 Process Photography (3)

Prereq: 244, Phys 203. Applications of photography, with emphasis upon standardization of quality control, from exposure through printing by photo-offset and screen process methods. 1 lec, 4 lab.

342 Color Reproduction (3)

Prereq: 341. Production of multiple-color materials, including preparation of copy, photography and printing by offset or screen process. 1 lec, 4 lab.

350 Wood Forming (3)

Prereq: 250, Chem 122. (winter) Shaping objects from wood through lamination and methods other than cutting, as illustration of processes currently employed in industry. 1 lec, 4 lab.

351 Jigs and Fixtures (3)

Prereq: 250. Planning and constructing supplemental devices aimed toward increasing production quantity and quality in wood-working industry. 1 lec, 4 lab.

361 Product Design (2)

Prereq: 244, 250. Design principles applied through development of products. 4 lab.

362 Product Manufacture (3)

Prereq: Mgt 300. Development of entire plan for manufacturing products such as those designed in 361. Plan to include sequence of operations, supply and work flow, personnel requirements, production rate and cost predictions. 6 lab.

380 Driver Safety (3)

Prereq: Psy 375. Current traffic conditions and regulations affecting driving as preparation to becoming instructors in driver education. Lab involves working with novice drivers. 2 lec, 2 lab.

381 Traffic Safety (3)

Prereq: 380. Organization and administration of driver education, including study of related attitudes and methods practiced in existing programs. Practice instruction included. 2 lec, 2 lab.

390 Materials (3)

Prereq: 12 hrs. Sources, manufacture and applications of common materials not given more extensive coverage within other departmental courses. 3 lec.

391 Elementary Industrial Arts (2)

Prereq: elementary education major. Planning and construction of projects designed to supplement other instruction at elementary level. 4 lab.

395 Co-op Work Study (5, max 15)

Prereq: perm. Work-study participation in established industrial training programs. Credit dependent upon advance registration and acceptance by approved companies participating in program.

396 Intern Supervision (3)

Prereq: 395 or perm. Practice supervision simulating foremanship level for students involved in production activity within other departmental courses. 1 lec, lab arranged.

413 Die Making (3)

Prereq: 312. Preparation and utilization of punching and forming dies for working metal according to commonly employed industrial processes. 1 lec, 4 lab.

421 Power Transmission (2)

Prereq: 323. Practice with common power transmission units, including study of transmission efficiency and adjustments affecting operational characteristics. 4 lab.

435 Control Circuits (3)

Prereq: 333. Combinations of basic electronic circuitry in more complex arrangements commonly employed for machine control. Emphasis upon adjustment and correction of malfunctioning controls. 1 lec, 4 lab.

436 Electronic Applications (3)

Prereq: 333 or 336. Advanced experimental work on individual problems, as approved by instructor, for extension of knowledge from previous courses. 6 lab.

Interpersonal Communication

443 Advanced Graphics (2, max 4)

Prereq: 341. Problem solving in graphic reproduction, as means of depth study in specific phases of this area. 4 lab.

470 Intern Teaching (3)

Prereq: Educ 351, 12 hrs. Presenting technical and related material in industrial arts classes. 2 lec, lab arranged.

483 Safety Programs (3)

Prereq: 12 hrs. Organization patterns of safety programs, and how they are applied, in manufacturing industry. 3 lec.

484 Maintenance Systems (3)

Prereq: 12 hrs. Maintenance systems currently utilized, with consideration of where and how each may be installed. 3 lec.

INTERNATIONAL STUDIES

The Center for International Studies offers a multidisciplinary certificate in African, Asian or Latin American studies, designed for undergraduate students as a supplement to the major. The requirements are 1) six courses totaling at least 18 quarter hours and dealing with one of the three world regions. Courses should be selected from at least three disciplines. 2) Study of a language relevant to that world region through the intermediate level. 3) A grade point average of 2.50 in all courses taken toward the certificate. The certificate is awarded upon graduation from Ohio University. Students seeking a certificate must register with the undergraduate adviser of the Center for International Studies.

For further information about the undergraduate certificate, the Center for International Studies and other international activities, see the Special Programs section of this catalog.

The Center for International Studies is responsible for the following interdisciplinary courses taught in the University College:

101 Modern Africa (4)

Interdisciplinary introductory survey of Africa, its history and modern development. Disciplines included: anthropology, art, dance, economics, education, ethnomusicology, geography, government, history, linguistics and literature.

102 Modern Africa (4)

Continuation of 101. See 101 for description.

103 Modern Asia (4)

Introduction to the history, cultures and current problems of the civilizations of Asia. Lectures deal with education, economics and

politics of China, Japan, India and Southeast Asia.

104 Modern Asia (4)

Continuation of 103. See 103 for description.

INTERPERSONAL COMMUNICATION

101 Fundamentals of Speech (3)

Analysis of role of oral communication in society with emphasis on speaker-listener responsibilities and needs; performance directed toward development of proficiency in oral communication elements.

103 Public Speaking (4)

Principles of public speaking, practice in presenting informative, entertaining and persuasive speeches with emphasis on communicative process. Fr and soph only.

104 Listening (2)

Understanding of processes of listening. Practical application of theory.

105 Introduction to Mass Communication (4)

Development, structure, functions, processes, control and effects of mass media. 4 lec. Same as Jour 105 and R-TV 105.

107 Introduction to Verbal Language Behavior (2)

Fundamental linguistic theory of verbal language production in message generation. Individual projects in listening laboratory to increase proficiency.

205 Techniques of Group Discussion (4)

Group discussion techniques and their implementation; frequent practice in discussion.

210 Parliamentary Procedure (2)

Theory and procedures by which organizations are run according to rules of order.

215 Argumentation and Debate (3)

Basic principles of argumentative discourse including concepts of presumption, burden of proof, rhetorical forms of reasoning and evidence. Practice in applying of these principles.

217 Forensic Workshop (1-6)

Opportunity for intensive work in forensic activities. Small groups of students work intimately with staff members in preparing for audience and contest appearances as debaters, discussionists, orators, oral interpreters and extemporaneous speakers. To receive credit, students must participate in at least 1 inter-collegiate contest.

220 Oral Interpretation of Literature (3)
Techniques of oral interpretation and development of adequate intellectual and emotional responsiveness to meaning of literature.

334 Introduction to Communication Process (3)
(fall, spring) Communication process in terms of its philosophical bases, its major variables and its forms and effects.

335 Bases of Speech Communication (3)
(winter, spring) Theory underlying source and message variables with emphasis upon psychological, acoustical, physiological and phonological dimensions of language in speech communications.

353A History and Criticism of Courtroom Oratory (3)
Famous cases and methods of communication of masters of courtroom and judicial oratory. Cases, trials including Cicero, Strafford, Charles I, Erskine, Hastings, Marshall, Webster, Darrow, Sacco-Vanzetti. (See also CA 303, 304, 305.)

353B History and Criticism of Political Oratory (3)
Methods of communication, rhetorical theories of masters of political oratory. Debates including Burke, Chatham, Pitt, Calhoun, Clay, Webster. Movements including nationalism, imperialism, social and political reform.

353C History and Criticism of 20th Century Oratory (3)
Methods of communication of masters of the period. Figures: Hitler, Mussolini, Lenin, Wilson, Churchill, Roosevelt, Kennedy, King. Movements: rhetoric of revolution, nationalism, fascism, socialism, communism, republicanism.

404 Principles and Techniques of Interviewing (3)
Prereq: perm and sr rank. Methods used in 2-party, face-to-face oral communicative situations commonly encountered in organizational and professional environments. Intensive practice through role-playing and real-life interviews in and out of class, emphasizing skills involved in giving and getting information, persuasion and job-employment situations.

405 Principles of Conference Leadership (4)
Prereq: 205 or perm. (winter, summer) Group process as it applies to problem-solving, discussion and conferences, with emphasis on leadership methods and skills.

412 Advanced Public Speaking (3)
(fall, spring) Principles of public speaking with emphasis on research and composition. Various types of speeches given to audiences outside classroom.

421 Teaching Speech and Theater I (3)
Prereq: 3rd qtr jr or sr. (fall, spring) Philosophy of speech (secondary) education; units or topics identification; exploration of methodologies (traditional and new); diagnostic devices; organization of objectives, content and learning activities.

422 Teaching Speech and Theater II (2)
(winter, spring) Individual projects include development of course of study units in speech and theater, evaluation procedures and lesson plans.

425 Direction of Forensic Programs (3)
Organization of forensic programs, management of interschool contests and tournaments, principles of coaching and judging. Practical application in University forensic program.

432 Creativity in Communication (4)
Creativity as it relates to communication. Implementation of creativity examined in areas of business, industry, teaching and interpersonal relations.

433 Applications of General Semantics (4)
Chief formulations from general semantics and their applications to field of communication.

435 Theories of Argument (3)
Relations between formal logic and rhetorical systems of argument; intensive study of fallacies and of experimental findings related to study of argument.

442 Communication and Persuasion (4)
Process of communication and attitude change, survey of general theories and typical research, analysis of contemporary persuasion, projects in experimental persuasion.

445 Communication in Organizations (4)
Prereq: perm and sr rank. Traditional and modern concepts of channels of communication in complex organizations (government, industry, education, etc.). Influence of organizational theory on communicative patterns and tasks.

446 Communication and the Campaign (4)
Prereq: perm and sr rank. Management theory and process of communication as applied in campaign situations (political, fund-raising, information, publicity, etc.). Students will apply theory in out-of-class campaign situations.

448 Cross-Cultural Communication (4)

Analysis of processes and problems of communication as affected by national cultures; effects of differences in language, values, meaning, perception and thought.

450 Introduction to Canonical Rhetoric (3)

(fall, spring) Ancient and modern rhetorical concepts and theories; emphasis on relationship of rhetoric to poetics, ethics, law and modern communication theory.

452 Psychology of Speech (4)

Psychological principles active in communication such as concept-reference; vocal, visual and verbal cues; attention, listening, perception, verbal conditioning and phonetic symbolism.

458 Responsibilities and Freedom of Speech in Communication (4)

Review of ethical background, social and political foundations and famous cases of freedom of speech.

460 Contemporary Public Address (4)

Analysis of principal speakers and settings since 1933. World leaders such as Roosevelt, Hitler and Churchill; American political speakers such as Dewey, Stevenson and McCarthy; social leaders such as Thomas, Graham and King.

481 Measurement of Speech Communication (4)

Prereq: perm and sr rank. Measurement principles, instruments and techniques, written and oral, in speech communication situation; problems of measuring and evaluating speaking and listening performances, and development and use of written examinations of content.

498 Special Problems (2-4, max 12)

Prereq: written proposal, perm. May be repeated for credit.

499 Independent Readings (2-4, max 12)

Prereq: written proposal, perm. May be repeated for credit.

JOURNALISM

The Ohio University School of Journalism is accredited by the American Council on Education for Journalism. As one of a limited number of accredited schools and departments of journalism in the United States, it is a member of the American Association of Schools and Departments of Journalism.

105 Introduction to Journalism and Mass Communications (4)

All the forms of mass communication including newspapers, magazines, radio-television, book publishing, public relations, advertising and photojournalism. Begins with analysis of communication process and ends with media career opportunities. Similar to R-TV 105. Replaces Jour 111.

221 Graphics of Communication (5)

Prereq: Majors only. Creative and practical aspects of typography, layout and design of printed communication.

221A Graphics of Communication (5)

Creative and practical aspects of typography, layout and design of printed communication.

231 News Reporting (4)

Prereq: Typing proficiency and major or perm. Methods of gathering and evaluating news and writing typical types of news stories. Practice work covering assignments and preparing copy. An English proficiency test is part of this course.

231A News Reporting (4)

Prereq: Typing proficiency, non-majors only. Methods of gathering and evaluating news and writing typical types of news stories. Practice work covering assignments and preparing copy. English proficiency test is part of this course.

231B News Reporting (4)

Prereq: Major, prior reporting experience and perm. Accelerated section for journalism majors with some prior experience in reporting. Methods of gathering and evaluating news and writing typical types of news stories. Practice work covering assignments and preparing copy. English proficiency test is part of this course.

250 Advertising Principles (5)

Prereq: Advertising and PR majors or perm. Major factors in development of advertising programs.

ITALIAN

See Modern Languages

250A Advertising Principles (5)

Major factors in development of advertising programs.

311 History of American Journalism (5)

Prereq: Major or perm. Development of newspaper, magazine and broadcast journalism from colonial period to present. Social, political, economic and mechanical aspects.

321 Newspaper Advertising and Layout (4)

Prereq: 250 and major or perm. Operation of advertising department from viewpoint of advertising manager.

323 Newspaper Advertising Practice (2)

Prereq: 321, perm. Lab work in preparing copy for local display advertisers of the *Athens Messenger*. Other experience in classified, national and promotion advertising.

325 Photojournalism (3)

Prereq: 231 or perm. Basic principles and practices of photojournalism for newspapers, magazines and television. Includes consideration of roles of photographers and picture editors in communications and their relationships with other members of the editorial team and mechanical departments of publications. Students shoot pictures on assignment. Film processing and printing handled by commercial photofinishing plant.

331 Reporting Contemporary Issues (3)

Prereq: 231, jr or sr rank. *J. Click, R. Izard, D. Lambert, L. Sargent*. Research, reading and speech reporting on current social problems. Emphasis on intelligent understanding and ability to report in depth for mass audience.

332 Reporting Practice (2)

Prereq: 231, perm. *C. Reamer*. Assignments at the *Athens Messenger* in city, sports and women's desk reporting, along with features.

332B Reporting Practice (2)

Prereq: 231 and perm, Black Studies Institute only. Assignments at the Black Studies Institute in news and feature reporting about black community.

333 News Editing (4)

Prereq: C or better in 231. Copyreading, headline writing, news selection and layout of news pages.

334 Editing Practice (2)

Prereq: 333, perm. *R. Powers*. Copyreading on the *Athens Messenger*. Handling of local correspondence, wire copy and working out make-up problems.

335 Picture Editing (3)

Prereq: 333 or perm. Principles and practices of picture editing. Includes consideration of picture sources, assignment and handling; photographic technique and esthetics; legal and ethical factors; visual idiosyncracies of various media.

351 News in Broadcasting (3)

Prereq: 231 or perm. *N. Dohn, P. Wagner*. News programming, practices and problems in broadcasting. Preparation of news reports for broadcast.

353 Radio-TV News Practice (2)

Prereq: 351 or perm. *N. Dohn, P. Wagner*. Preparation of news for broadcast. Students serve as assistants in newsroom of University's broadcasting stations or, by special arrangement and perm, in other stations.

362 Community Newspapers (3)

Prereq: 333 or perm. Editorial and business practices of suburban weeklies and dailies.

363 Reviewing and Criticism (3)

Prereq: 231 and major or perm. Written criticism of fine and popular arts. Special role of critic who serves both as reporter and evaluator of artistic works for lay audience.

411 Newspaper and Communications Law (3)

Prereq: 333. Principles and case studies in communications law, constitutional guarantees, libel, privacy, contempt, privilege, copyright and government regulatory agencies.

412 Mass Media and Society (2)

Prereq: 333 or perm. Social responsibility of journalistic or other mass communicator. Professional codes, responsibility of media for social change, reaction to political and economic pressures.

421 Graphic Production Processes (5)

Prereq: 221 and perm. Advanced study of all processes for reproducing printed communication. Theory and lab.

422 Advertising Production (3)

Prereq: 221, 321 or perm. *A. Turnbull*. Techniques and problems in methods of advertising production.

431 Industrial and Business Magazines (3)

Prereq: 221 and major or perm. Industrial, business and general magazines from editing, layout and production approach. Actual laboratory magazine produced by class.

Latin American Studies

441 Magazine Feature Writing (4)

Prereq: 231 or 15 hrs English or perm. Writing and marketing factual magazine feature articles of various types. Finding subjects, securing photographs, writing articles and surveying markets.

442 Advanced Magazine Feature Writing (3)

Prereq: 441. Writing and marketing magazine articles. Emphasis on specialized markets.

450 Advertising Copy Writing (3)

Prereq: 250 and advertising and PR majors or perm. Effective persuasion in print.

452 TV Newsfilm Production and Editing (3)

Prereq: 351 or perm. Principles and practices of TV newsfilm production and editing. Similar to R-TV 452.

455 Seminar in Broadcast News (3)

Prereq: perm. *N. Dohn, P. Wagner*. Discussion of problems — operational, social, economic, legal and ethical—faced by broadcasters reporting public affairs.

461 Specialized Journalism (3)

Prereq: sr rank and perm. Seminar approach to individual study of journalistic areas of special interest to individual students.

462 Internship (3)

Prereq: perm before beginning internship. *N. Dohn, R. Izard*. Conference course for students who have completed internship with an approved organization. Student will submit a comprehensive report analyzing his internship experience.

464 Reporting of Public Affairs (3)

Prereq: sr rank in journalism or perm. *P. Wagner, R. Izard*. Problems of preparing in-depth, interpretative and analytical reports on public affairs for mass media, with practice in writing such reports. Focus mostly on contemporary controversial issues.

465 The Editorial Page (3)

Prereq: sr rank and major or perm. Editorial page in opinion formation. Problems of content selection and presentation. Extensive writing of analytical and persuasive editorials and interpretive articles in depth.

466 International Communications (5)

Prereq: sr rank and major or perm. Development and operations of world mass communication channels and agencies. Com-

parative analysis of media, media practices and flow of news throughout the world. Relation of communication practices to international affairs and understanding.

467 Foreign Correspondence (3)

Prereq: sr rank and 466 or perm. Role of foreign correspondent in news-gathering. History, scope, techniques.

471 Public Relations Principles (5)

Prereq: sr rank and PR major or perm. Public relations planning and techniques; selected communication studies and theories. Polling, defining objectives and analysis of public relations messages.

472 Advanced Public Relations (4)

Prereq: 471 or perm. *H. Culbertson, staff*. Planning public relations programs and projects, including selection of audiences, messages and media, and evaluation of effects. Project in area of student's interest.

481 Newspaper Management (3)

Prereq: 333. *A. Turnbull*. Problems in publishing affecting all departments.

482 Radio-Television Advertising and Management (4)

Prereq: 250 or perm. *A. Turnbull*. See title.

484 Supervising School and College Publications (4)

Prereq: 12 hrs or perm. (summer) *R. Baird, staff*. Conference course for advisers of high school and college newspapers, magazines and yearbooks. Problems relating to staff selection, content of publications, copy, layout, photography, printing, advertising and business phases. In summer sessions publications workshop analyzed on a case study basis.

491 Research in Journalism and Communications (1-15)

Prereq: perm.

LATIN

See Classical Languages

LATIN AMERICAN STUDIES

See International Studies

LIBRARY SCIENCE

201 The Use of Library Resources I (3)
(fall, spring) Effective use of modern library reference resources. Required for minor in library science. Stresses general works. May be taken without 202 by those who do not choose to minor in library science.

202 The Use of Library Resources II (3)
Prereq: 201. (winter) Training in effective use of modern library reference resources. Required for minor in library science. Stresses specific subject reference materials.

301 Library Services for Children (4)
Prereq: 303 and EdEl 321. (spring) Book selection and group work with children, including story programs, book talks, library lessons and practical experience with children.

302 Books for High School Readers (4)
(spring) Books considered for whole reading approach to literature, including pleasure reading outside classroom.

303 School Library (5)
(winter) Methods and materials in organizing and developing school media center service. Required for minor in library science.

401 History of Books, Printing and Libraries (3)
(winter) Development of books, printing and libraries from early times to present.

402 Advanced Library Studies (2-5)
Prereq: perm. Elective designed for student who wants to explore some facet of library work in greater depth.

403 Classification and Cataloging (5)
(fall) Classifying and cataloging books and materials with practice in preparation of card catalog for high school media center. Required for minor in library science.

40 Intensive English as a Foreign Language (15)

(fall, spring) Full-time intensive study of English as foreign language for students beginning at elementary level. Normally followed by 45. 4 classroom practice and recitation hrs and 1 required language lab practice hr daily. Primary emphasis is on developing mastery of spoken English.

45 Intensive English as a Foreign Language (15)

Prereq: 40. (winter, summer) Full-time intensive study of English as foreign language. Follows 40 to constitute a 20-week intensive course. 4 hrs of classroom practice and recitation and 1 hr of required language lab practice daily. Practice of spoken English continues, but primary emphasis shifts to mastery of usage of written English.

50 Intensive English as a Foreign Language (15)

Prereq: Intermediate proficiency level. (fall, winter, summer) Full-time intensive study of English as foreign language for students beginning at intermediate level. Not a sequence with either 40 or 45. 4 hrs of classroom practice and recitation and 1 hr of required language lab practice daily. Emphasis on both spoken and written English usage. In addition to scheduled EngFL class hrs, the student devotes 6-8 hrs per wk to auditing appropriate University classes.

60 Supplemental English as a Foreign Language (8)

Prereq: Advanced proficiency level. Semi-intensive supplemental study of English as foreign language at advanced level for students enrolled in a part-time academic program. 2 hrs of classroom practice and recitation daily. Emphasis on both spoken and written English usage. May follow either 45 or 50.

LINGUISTICS

English as a Foreign Language
Linguistics

English as a Foreign Language

Credit hours listed for OPIE 40, 45, 50, 60 are not applicable to degree requirements. For English for non-native speakers applicable to degree requirements, see English 160.

Linguistics

A major in linguistics is not offered. Students desiring to prepare for graduate study in linguistics should see the entry, Linguistics, under Special Curricula in The College of Arts and Sciences, page 26.

270 The Nature of Language (5)

(spring) Non-technical linguistic survey of nature of human language.

370A Language and Linguistics (3)

Prereq: perm. (fall) Introductory survey of linguistics.

Linguistics

370B Language and Linguistics (3)

Prereq: 370A, perm. (winter) Continuation of 370A. See 370A for description.

371 Language, Culture and Personality (5)

Prereq: 270 or 370. (winter) Social, cultural and psychological functions of language.

372 Applied Linguistics, Elementary (5)

Prereq: open to fr. (fall) 372A Hausa, 372B Chinese, 372C Malay/Indonesian, 372D Swahili.

372A Applied Linguistics, Elementary Hausa (5)

Prereq: open to fr. (fall).

372B Applied Linguistics, Elementary Chinese (5)

Prereq: open to fr. (fall).

372C Applied Linguistics, Elementary Malay/Indonesian (5)

Prereq: open to fr. (fall).

372D Applied Linguistics, Elementary Swahili (5)

Prereq: open to fr. (fall).

373 Applied Linguistics, Elementary (5)

Prereq: 372 or equiv. (winter) 373A Hausa, 373B Chinese, 373C Malay/Indonesian, 373D Swahili.

373A Applied Linguistics, Elementary Hausa (5)

Prereq: 372A or equiv. (winter).

373B Applied Linguistics, Elementary Chinese (5)

Prereq: 372B or equiv. (winter).

373C Applied Linguistics, Elementary Malay/Indonesian (5)

Prereq: 372C or equiv. (winter).

373D Applied Linguistics, Elementary Swahili (5)

Prereq: 372D or equiv. (winter).

374 Applied Linguistics, Elementary (5)

Prereq: 373 or equiv. (spring) 374A Hausa, 374B Chinese, 374C Malay/Indonesian, 374D Swahili.

374A Applied Linguistics, Elementary Hausa (5)

Prereq: 373A or equiv. (spring).

374B Applied Linguistics, Elementary Chinese (5)

Prereq: 373B or equiv. (spring).

374C Applied Linguistics, Elementary Malay/Indonesian (5)

Prereq: 373C or equiv. (spring).

374D Applied Linguistics, Elementary Swahili (5)

Prereq: 373D or equiv. (spring).

375 Applied Linguistics, Intermediate (5)

Prereq: 374 or equiv. (fall) 375A Hausa, 375B Chinese, 375C Malay/Indonesian, 375D Swahili.

375A Applied Linguistics, Intermediate Hausa (5)

Prereq: 374A or equiv. (fall).

375B Applied Linguistics, Intermediate Chinese (5)

Prereq: 374B or equiv. (fall).

375C Applied Linguistics, Intermediate Malay/Indonesian (5)

Prereq: 374C or equiv. (fall).

375D Applied Linguistics, Intermediate Swahili (5)

Prereq: 374D or equiv. (fall).

376 Applied Linguistics, Intermediate (5)

Prereq: 375 or equiv. (winter) 376A Hausa, 376B Chinese, 376C Malay/Indonesian, 376D Swahili.

376A Applied Linguistics, Intermediate Hausa (5)

Prereq: 375A or equiv. (winter).

376B Applied Linguistics, Intermediate Chinese (5)

Prereq: 375B or equiv. (winter).

376C Applied Linguistics, Intermediate Malay/Indonesian (5)

Prereq: 375C or equiv. (winter).

376D Applied Linguistics, Intermediate Swahili (5)

Prereq: 375D or equiv. (winter).

377 Applied Linguistics, Intermediate (5)

Prereq: 376 or equiv. (spring) 377A Hausa, 377B Chinese, 377C Malay/Indonesian, 377D Swahili.

377A Applied Linguistics, Intermediate Hausa (5)

Prereq: 376A or equiv. (spring).

377B Applied Linguistics, Intermediate Chinese (5)

Prereq: 376B or equiv. (spring).

377C Applied Linguistics, Intermediate Malay/Indonesian (5)

Prereq: 376C or equiv. (spring).

377D Applied Linguistics, Intermediate Swahili (5)

Prereq: 376D or equiv. (spring).

378 Applied Linguistics, Advanced (5)

Prereq: 377 or equiv. (fall) 378A Hausa, 378B Chinese, 378C Malay/Indonesian, 378D Swahili.

378B Applied Linguistics, Advanced Chinese (5)

Prereq: 377B or equiv. (fall).

379 Applied Linguistics, Advanced (5)

Prereq: 378 or equiv. (winter) 379A Hausa, 379B Chinese, 379C Malay/Indonesian, 379D Swahili.

379B Applied Linguistics, Advanced Chinese (5)

Prereq: 378B or equiv. (winter).

380 Applied Linguistics, Advanced (5)

Prereq: 379 or equiv. (spring) 380A Hausa, 380B Chinese, 380C Malay/Indonesian, 380D Swahili.

380B Applied Linguistics, Advanced Chinese (5)

Prereq: 379B or equiv. (spring).

MALAY

See Linguistics

MANAGEMENT AND ORGANIZATIONAL BEHAVIOR

300 Management (4)

Prereq: jr rank. Behavior and decision process in organizations.

420 Administration of Personnel (4)

Prereq: sr rank. Compendium of practices in personnel management. Consideration of such areas as employee selection, training, performance evaluation and wage and salary administration.

421 Personnel Management Problems (4)

Prereq: 420. Personnel problems and their relation to various ethological concepts. A case approach.

425 Labor Relations (4)

Prereq: sr rank. Nature of collective bargaining; labor-management conflict or consensus; grievance procedures; arbitration; contract administration.

430 Information Management (4)

Prereq: sr rank or perm. Information networks and flows in organizations within total-systems framework.

440 Organizational Theory and Behavior (4)

Prereq: sr rank. Conceptual framework of behavioral sciences to management and organizations. Motivation and leader behavior within organizational settings.

484 International Comparative Management (4)

Prereq: sr rank. Survey and analysis of similarities and differences in management systems, processes and styles, as well as evaluation of changes and their impact in selected groups of countries such as Britain, Czechoslovakia, West Germany, India, Israel, Japan, United States and U.S.S.R. Cross listed with BA 484.

491 Seminar (3, 4 or 5)

Prereq: perm. Selected topics of current interest in management and organizational behavior area.

492 Management Thought (4)

Prereq: sr rank. Review of development of managerial theories from 5000 B.C. to present with consideration of their application to present organizational settings.

493 Readings (1-15)

Prereq: perm. Readings in selected fields of management and organizational behavior. Topics selected by student in consultation with faculty member.

494 Management Research (4)

Prereq: sr rank. Practical application of research methods in behavioral sciences to management problems, emphasizing research available and its use in decision making and in solving managerial problems.

495 Research (3, 4 or 5)

Prereq: perm. Methodology, analysis of data and preparation of research findings.

496 Management of Change (4)

Prereq: 440. Planning and implementing change in organizational settings.

497 Independent Research (1-15)

Prereq: perm. Research in selected fields of management and organizational behavior under direction of faculty member.

MARKETING

301 Basic Marketing Concepts and Problems (4)

Prereq: Econ 102. Introductory macro view of marketing as a fundamental social system. Analysis of primary functions and components of the system is augmented by use of business cases.

302 Marketing Strategy and Problems (4)

Prereq: 301. Marketing plans and strategies available to individual firm competing in a dynamic environment. Cases employed to relate marketing principles to actual business situations.

303 Analysis of Marketing Problems (4)

Prereq: 302. Problems facing manufacturers and middlemen in marketing programs. Student will develop integrated marketing programs based on cases taken from actual business situations. Emphasis on development of analytical skills.

401 Management of Distribution (4)

Prereq: 302. Problems encountered by manufacturer in establishing and maintaining effective distribution system, concentrating on channel design and strategies.

425 Industrial Marketing (3)

Prereq: 302. Investigation and analysis of problems involved in marketing of industrial products.

441 International Marketing (4)

Prereq: 302. Marketing problems, opportunities and organization of multinational firms to serve overseas markets. Government aids and impediments and comparison of markets and marketing techniques in U.S. and foreign countries.

444 Consumer Behavior (4)

Prereq: 302, 6 hrs psychology and/or sociology. Individual, social and cultural influences that affect consumer behavior. Consideration of explanatory and predictive models.

445 Forecasting Business Trends (4)

Prereq: QM 356 or perm. Forecasting techniques and methodologies considered as tools decision makers use to provide a basis for determining nature of future environments in which business will have to operate. Forecasting is the means for integrating total corporate planning with technical marketing and financial planning. (Taught on team basis with marketing and quantitative methods faculty.) Cross listed with QM 445.

450 Management of Promotion (4)

Prereq: 302. Problem-solving course leading to development and management of firm's promotional "mix" with emphasis on use of mass media and on stimulation of reseller's cooperation.

458 Sales Management (3)

Prereq: 302. Principles and practices in planning, organizing and controlling sales force. Selection, training, compensating, supervising and stimulating salesmen. Analysis of sales potentials and costs.

479 Marketing Research (4)

Prereq: 21 hrs business administration, 8 hrs marketing. Techniques involved in collection, tabulation and analysis of marketing information.

481 Mathematical Methods of Marketing Analysis (4)

Prereq: 479, QM 356, QM 370. Quantitative techniques that can be used in analysis of marketing problems and application of these methods to problem situations. (Taught on team basis with marketing and quantitative methods faculty.) Cross listed with QM 481.

491 Seminar (3, 4 or 5)

Prereq: perm. Selected topics of current interest in marketing area.

493 Readings (1-15)

Prereq: perm. Readings in selected fields of marketing. Topics selected by student in consultation with faculty member.

495 Research (3, 4 or 5)

Prereq: perm. Methodology, analysis of data and preparation of research findings.

497 Independent Research (1-15)

Prereq: perm. Research in selected fields of marketing under direction of faculty member.

498 Internship (1-15)

Prereq: perm.

MATHEMATICS

Computer Science Mathematics

The requirements for a major in mathematics for the AB or BS degree consist of 50 hours in courses at the 200 level or above, at least nine hours being at the 400 level or above. These requirements are elastic enough to encompass a wide range of interests; unfortunately, a course selection which prepares one for work in industry or secondary school teaching is frequently not adequate preparation for graduate work in mathematics.

In all cases it is recommended that a program be chosen in consultation with an adviser from the math department.

The following are merely suggested as guidelines for various math majors:

Graduate Study. For a strong preparation for graduate study in mathematics it is recommended that all three sequences, 413 A-B-C, 460A-B-C and 480A-B be taken.

Any student wishing to study mathematics strictly from a mathematician's viewpoint, in specially designed courses (standard courses listed in the bulletin are designed to serve many departments and programs), should inquire about our Honors Program.

Applied Mathematics. An applied mathematics major should choose sufficient courses for the major from the following: 213, 263 A-B-C, 340, 350A-B, 410, 440, 441, 442, 446, 460A-B-C, 470A-B, 480A-B.

Teaching Certification. See requirements for comprehensive major in math education, p. 54.

Computer Science

The College of Arts and Sciences does not offer a major in computer science alone. Students wishing to concentrate in this area may do so by fulfilling the following requirements in mathematics and in computer science, with at least a 2.0 average in each area.

1. Choose at least 36 hours, including nine hours at the 400 level, from the following list in mathematics: 263A-B-C, 207, 213, 214, 340, 350A-B, 407A-B, 410, 442, 444A-B, 446.

2. Take the following courses in computer science: 201, 202, 308 and 341A.

Anyone wishing to concentrate in computer science should consult with Professor Irwin.

150 Computer Science—Survey (1)

Digital computer machine, its components, operation, control, history and use. Particular emphasis placed on developing influence of digital computer in business, science and humanities. Automation examined.

201 Introduction to Computing (5)

Prereq: 3 yrs high school math. Algorithms, programs and computers. Basic programming and program structure. Programming and computing systems. Debugging and verification of programs. Data representation. Organization and characteristics of computers. Survey of computers, languages, systems and applications. Computer solution of several numerical and nonnumerical problems using 1 or more programming languages.

202 Computers and Programming (5)

Prereq: 201. Computer structure, machine language, instruction execution, addressing techniques and digital representation of data. Computer systems organization, logic design, micro-programming and interpreters. Symbolic coding and assembly systems, macro definition and generation and program segmentation and linkage. Systems and utility programs, programming techniques and recent developments in computing. Several computer projects to illustrate basic machine structure and programming techniques.

251 Non-Numeric Computer Programming and Logic (5)

Prereq: soph rank. Principles and practice of computer solution of problems not involving extensive numerical calculations. Typical problems exist in natural language analysis and translation, literature search and collation, non-numeric mathematics, artificial intelligence, pattern recognition, etc.

252 Introduction to Digital Computer Programming for Business (5)

Principles and practice of computer solution of problems in business. Typical problems exist in accounting, quantitative methods and management. Artificial language COBOL used.

253 Introduction to Digital Computer Programming for Engineering and the Physical Sciences (5)

Prereq: Math 263A-B-C. Principles and practice of computer solution of problems involving extensive numerical calculations as found in physical sciences, engineering and numerical mathematics.

254 Introduction to Digital Computer Programming for Behavioral, Educational and Biological Sciences (5)

Prereq: soph rank. Problem organization for computer solution using scientifically oriented algorithmic languages such as FORTRAN and PL/1. Concepts of and practice in logical problem analysis, artificial language syntax and semantics, problem flow, testing and debugging, input/output, artificial intelligence and use of auxiliary storage using appropriate problems in student's field of interest.

308 Introduction to Discrete Structures (5)

Prereq: 201. Review of set algebra including mappings and relations. Algebraic structures including semigroups and groups. Elements of theory of directed and undirected graphs. Boolean algebra and propositional logic. Applications of these structures to various areas of computer science.

341A Programming Languages (5)

Prereq: 202 and 308. Formal definition of programming languages including specification of syntax and semantics. Simple statements including precedence, infix, prefix and postfix notation. Global properties of algorithmic languages including scope of declarations, storage allocation, grouping of statements, binding time of constituents, sub-routines, co-routines and tasks. List processing, string manipulation, data description and simulation languages. Run-time representation of program and data structures. Replaces CS 351.

341B Compiler Construction (5)

Prereq: 341A. Review of program language structures, translation, loading, execution and storage allocation. Compilation of simple expressions and statements. Organization of a compiler including compile-time and run-time symbol tables, lexical scan, syntax scan, object code generation, error diagnostics, object code optimization techniques and overall design. Use of computer writing languages and bootstrapping. Replaces CS 352.

341C Systems Programming (5)

Prereq: 341A and 376. Review of batch process systems programs, their components, operating characteristics, user services and their limitations. Implementation techniques for parallel processing of input/output and interrupt handling. Overall structure of multiprogramming systems on multi-processor hardware configurations. Details on addressing techniques, core management, file systems design and management, system accounting and other user-related services. Traffic control interprocess communication, design of system modules and interfaces. System updating, documentation and operation. Replaces CS 353.

361 Numerical Analysis I (5)

Prereq: 253 and Math 340. Thorough treatment of solutions of equations, interpolation and approximations, numerical differentiation and integration and numerical solution of initial value problems in ordinary differential equations. Selected algorithms programmed for solution on computers.

362 Numerical Analysis II (5)

Prereq: 253, Math 213 and Math 340. Solution of linear systems by direct and iterative methods, matrix inversion, evaluation of determinants and calculation of eigenvalues and eigenvectors of matrices. Application to boundary value problems in ordinary differential equations. Introduction to numerical solution of partial differential equations. Selected algorithms programmed for solution on computers.

376 Data Structures (5)

Prereq: 202 and 308. Basic concepts of data. Linear lists, strings, arrays and orthogonal lists. Representation of trees and graphs. Storage systems and structures and storage allocation and collection. Multilinked structures. Symbol tables and searching techniques. Formal specification of data structures, data structures in programming languages and generalized data management systems.

381 Information Organization and Retrieval (5)

Prereq: 376. Structure of semiformal languages and models for representation of structured information. Aspects of natural language processing on digital computers. Analysis of information content by statistical, syntactic and logical methods. Search and matching techniques. Automatic retrieval systems, question-answering systems. Production of secondary outputs. Evaluation of retrieval effectiveness.

391 Junior Seminar (1)

Prereq: jr rank. Formal presentation by individual students of specified topics from current literature in computer science and defense of interpretations and conclusions. Concurrent with 491-492-493. Participation by all jr and sr students is required and by all faculty is expected.

392 Junior Seminar (1)

Prereq: 391. Continuation of 391. See 391 for description.

393 Junior Seminar (1)

Prereq: 392. Continuation of 391-392. See 391 for description.

401 Mathematical Models of Sequential Machines (5)

Prereq: 308 or Math 214. Definition and representation of finite state automata and sequential machines. Equivalence of states and machines, congruence, reduced machines and analysis and synthesis of machines. Decision problems of finite automata, partitions with substitution property, generalized and incomplete machines, semigroups and machines, probabilistic automata and other topics.

402 Theory of Computability (5)

Prereq: 308 or Math 214. Introduction to Turing machines, Wang machines, Shepherdson-Sturgis and other machines. Godel numbering and unsolvability results, halting problem, Post's correspondence problem and relative uncomputability. Machines with restricted memory access, limited memory and limited computing time. Recursive function theory and complexity classification. Models of computation including relationships to algorithms and programming.

410 Formal Languages and Syntactic Analysis (5)

Prereq: 341A, 376. Definition of formal grammars: arithmetic expressions and precedence grammars, context-free and finite-state grammars. Algorithms for syntactic analysis: recognizers, backtracking, operator precedence techniques. Semantics of grammatical constructs: reductive grammars. Floyd productions, simple syntactical compilation. Relationship between formal languages and automata.

411 Artificial Intelligence and Heuristic Programming (5)

Prereq: 376 and Math 350B. Definition of heuristic versus algorithmic methods, rationale of heuristic approach, description of cognitive processes and approaches to mathematical invention. Objectives of work in artificial intelligence, simulation of cognitive behavior and self-organizing systems. Heuristic programming techniques including use of list processing languages. Survey of examples from representative application areas. Mind-brain problem and nature of intelligence. Class and individual projects to illustrate basic concepts.

490 Special Problems in Computer Science (1-15)

Prereq: perm. Special project in 1 of various sub-fields of computer science or application area studied, investigated and/or solved by individual student or small group working in close relationship with instructor. Suitable problems might include construction of compiler for special purpose artificial language, perfection of computer code to solve some sig-

nificant problem or study of coherent sub-field of computer science. May be repeated for credit.

491 Senior Seminar (1)

Prereq: sr rank. Formal presentation by individual students of specified topics from current literature in computer science and defense of interpretation or conclusion. Concurrent with 391-392-393. Participation by all jrs and srs is required and by all faculty is expected.

492 Senior Seminar (1)

Prereq: 491. Continuation of 491. See 491 for description.

493 Senior Seminar (1)

Prereq: 492. Continuation of 491-492. See 491 for description.

499 Senior Thesis (1-9)

Prereq: sr rank. Solution of significant problem within field under direction of sr faculty member. May be repeated for credit.

Mathematics

011 Elementary Algebra (5)

(summer) For students with no high school algebra. Credit and points not counted toward degree.

032 Euclidean Geometry (5)

Prereq: 011 or 1 yr high school algebra. (summer) For students with no high school geometry. Credit and points not counted toward degree.

109A The Mathematical World—Number and Space (3)

(on demand, with approval of mathematics dept chairman) Terminal liberal arts courses for students with little or no background in college math. Basic topics from elementary and advanced branches of mathematics treated descriptively and in historical perspective. Not recommended to satisfy science or mathematics requirements.

109B The Mathematical World—Number and Space (3)

(on demand, with approval of mathematics dept chairman) Continuation of 109A. See 109A for description.

113 Algebra (5)

Prereq: at least 2 yrs high school math. Review topics in high school algebra including properties of rational field and real numbers. Graphs, relations and functions with domain

and range analysis, composite and inverse functions, theory of equations and mathematical induction and inequalities.

116 Analytic Trigonometry (2)

Prereq: 113, or 3 yrs high school math. Trigonometric functions and their properties, identities, equations and applications.

120 Foundations of Elementary Mathematics (5)

Prereq: high school algebra and geometry. Mathematical reasoning, structure of number system with justification of algorithms, introduction to geometry. Elementary education majors only.

140A Introductory Mathematical Systems for Business (5)

Prereq: at least 2 yrs high school math. (fall, winter) Presents basic concepts of college algebra, introduces trigonometry, presents linear systems of equalities and inequalities and introduces matrix operations and use of matrices in solving linear systems. Designed primarily for students entering the College of Business Administration.

140B Survey of Calculus for Business (5)

Prereq: 140A. (winter, spring) Introduces techniques of differentiation and integration with applications to business. Transition from 140B to 263B is difficult and is not to be recommended.

H197 Honors Math for Freshmen (6-10)

Prereq: perm. (fall) Special program for students of unusual ability.

H198 Honors Math for Freshmen (6-10)

Prereq: H197 or perm. (winter) Special program for students of unusual ability.

H199 Honors Math for Freshmen (6-10)

Prereq: H198 or perm. (spring) Special program for students of unusual ability.

207 Introduction to Number Theory (5)

Prereq: 113, or 4 yrs high school math, or perm of math dept. (winter, spring) Introduces student to one of the most simple yet most challenging branches of mathematics. Among topics discussed will be: mathematical induction, unique prime factorization, Euclidean algorithm, Diophantine equations, congruences and divisibility.

213 Elementary Linear Algebra (5)

Prereq: 113, or 4 yrs high school math, or perm of math dept. (fall, winter) Introduces elementary properties of matrices, determinants and linear systems.

214 Elementary Abstract Algebra (5)

Prereq: 113, or 4 yrs of high school math, or perm of math dept. (winter, spring) Elementary topics in abstract algebra selected from groups, rings, integral domains and fields.

230A Foundations of Geometry (3)

Prereq: 113, or 4 yrs high school math, or perm of math dept. (fall, winter) Introduction to axiomatic mathematics via 2 finite geometries and a variety of interpretive models. Develops plane Euclidean and non-Euclidean geometries in rigorous fashion from a modified Hilbert axiom system.

230B College Geometry (3)

Prereq: 230A. (winter, spring) Continuation of 230A. See 230A for description.

263A Analytic Geometry and Calculus (5)

Prereq: 113, or 4 yrs high school math, or perm of math dept. 263A-B-C is a basic introduction to calculus with emphasis on techniques and their applications. Topics covered are: functions and limits, differentiation and integration, analytic geometry, vectors, transcendental functions, polar coordinates, solid analytic geometry, partial differentiation, multiple integrals, infinite series.

263B Analytic Geometry and Calculus (5)

Prereq: 263A, 116 or equiv. Continuation of 263A. See 263A for description.

263C Analytic Geometry and Calculus (5)

Prereq: 263B. Continuation of 263A-B. See 263A for description.

H297 Honors Math for Sophomores (6-10)

Prereq: H199 or perm. (fall) Special program for students of unusual ability.

H298 Honors Math for Sophomores (6-10)

Prereq: H297 or perm. (winter) Special program for students of unusual ability.

H299 Honors Math for Sophomores (6-10)

Prereq: H298 or perm. (spring) Special program for students of unusual ability.

320 Teaching of Mathematics in Secondary School—Part I (2)

(fall, spring) Orientation of professional mathematics education on secondary school level.

333 Elementary Projective Geometry (3)

Prereq: 230B or perm. (spring) Topics in synthetic projective geometry.

340 Differential Equations (5)

Prereq: 263C. Ordinary differential equations and related topics.

350A Introduction to Mathematical Statistics (3)

Prereq: 263C. (begins fall and winter) Probability and sampling theory with applications. Topics in statistics.

350B Introduction to Mathematical Statistics (3)

Prereq: 350A. Continuation of 350A. See 350A for description.

360A Intermediate Analysis (3)

Prereq: 263C. Consists of rigorous study of following topics: properties of real numbers, limits, sequences, infinite series, continuity and differentiability of real valued functions on subsets of the real line, Riemann integration and power series.

360B Intermediate Analysis (3)

Prereq: 360A. Continuation of 360A. See 360A for description.

400 History of Mathematics (3)

Prereq: math major, jr, sr rank. (spring, summer) Survey of main lines of mathematical development in terms of contributions made by great mathematicians.

406A Foundations of Mathematics (3)

Prereq: 213 and 214. (fall, winter) Axiomatic development of real number system.

406B Foundations of Mathematics (3)

Prereq: 213, 214. (winter, spring) Introductory topics in set theory.

407A Number Theory (3)

Prereq: 263C. (begins fall) Topics in ordinary algebraic number theory.

407B Number Theory (3)

Prereq: 407A. Continuation of 407A. See 407A for description.

407C Number Theory (3)

Prereq: 407B. Continuation of 407A-B. See 407A for description.

410 Matrix Theory (3)

Prereq: 263C. (fall, spring) Matrix algebra, matrix solutions of linear equations, linear dependence and independence, rank and equivalence, determinants, eigenvalues and eigenvectors.

411A Linear Algebra (3)

Prereq: 213 or 410. (begins winter) Vector spaces and linear transformations, characteristic values, quadratic forms, dual spaces, normal forms and Jordan canonical forms.

411B Linear Algebra (3)

Prereq: 411A. Continuation of 411A. See 411A for description.

413A Introduction to Modern Algebra (3)

Prereq: 213 and 214. (fall, spring, summer) Elementary theory of groups, rings and fields.

413B Introduction to Modern Algebra (3)

Prereq: 413A. (fall, winter) Continuation of 413A. See 413A for description.

413C Introduction to Modern Algebra (3)

Prereq: 413B. (spring) Continuation of 413A-B. See 413A for description.

419 Topics in Algebra (3)

Prereq: perm. When demand is sufficient a course in some phase of algebra will be offered under this number.

420 Teaching of Mathematics in Secondary Schools—Part II (3)

Prereq: jr rank. (fall, spring) Analysis of basic ideas of algebra and geometry. Methods of presenting topics in these subjects to secondary school students.

429 Topics in Mathematics of Elementary and Secondary Schools (1-3)

Prereq: perm and sr rank. (summer) How and why concepts of advanced abstract mathematics should enforce curricula of grades K-12.

433 Projective Geometry (3)

Prereq: 213, 214, 333 or perm. (winter) Develops projective geometry analytically by means of homogeneous coordinates, and discusses properties by means of linear transformations and transformation groups.

434 Geometries (3)

Prereq: 433. (spring) Studies subgeometries of projective geometry generated by affine, similarity and Euclidean transformations.

439 Topics in Geometry (3)

Prereq: perm. When demand is sufficient a course in some phase of geometry will be offered under this number.

440 Vector Analysis (3)

Prereq: 263C. (fall).

441 Fourier Analysis and Partial Differential Equations (3)

Prereq: 340. (winter, spring).

442 Theory of Linear Programming (3)

Prereq: 213. (spring) Real linear algebra, solutions of systems of equalities and inequalities. Fundamental theorem of duality and equilibrium theorem with applications involving simplex method.

Military Science

444A Introduction to Numerical Analysis (3)

Prereq: 263C, 340. (begins winter) Introduction to complex variables and polynomials; interpolation with polynomials; Chebychev approximations; numerical differentiation and integration; solutions of systems of equations.

444B Introduction to Numerical Analysis (3)

Prereq: 444A. Continuation of 444A. See 444A for description.

446 Computer Numerical Analysis (3)

Prereq: 340, CS 153. (spring) Numerical methods for matrix inversion, eigenvalues, solutions of partial differential equations, function representation and simulation.

450A Theory of Statistics (3)

Prereq: 263C. (begins fall) Probability distribution of one and several variables, sampling theory, estimation of parameters, confidence intervals, analysis of variance, correlation and testing of statistical hypotheses.

450B Theory of Statistics (3)

Prereq: 450A. Continuation of 450A. See 450A for description.

450C Theory of Statistics (3)

Prereq: 450B. Continuation of 450A-B. See 450A for description.

460A Advanced Calculus (3)

Prereq: 360B or perm. (begins fall, spring, summer) Critical treatment of limits, continuity, differentiation of functions of one and several variables, series and theory of integration.

460B Advanced Calculus (3)

Prereq: 460A. (winter, fall) Continuation of 460A. See 460A for description.

460C Advanced Calculus (3)

Prereq: 460B. (spring) Continuation of 460A-B. See 460A for description.

470A Applied Complex Variables (3)

Prereq: 263C. (fall, winter) Analytic and harmonic functions, Cauchy integral and residue theorems, contour integration, Taylor and Laurent expansions, conformality and linear transformations with applications. Replaces 463A.

470B Applied Complex Variables (3)

Prereq: 470A. (winter, spring) Continuation of 470A. See 470A for description. Replaces 463B.

480A Elementary Point Set Topology (3)

Prereq: 460A. (begins fall) Introduction to basic concepts of topology, general topological spaces and metric spaces.

480B Elementary Point Set Topology (3)

Prereq: 480A. (winter) Continuation of 480A. See 480A for description.

490 Selected Topics in Mathematics (3)

Prereq: perm. When demand is sufficient, a course in some phase of mathematics will be offered under this number. (May be repeated for credit.)

491 Studies in Mathematics (1-15)

Prereq: 6 hrs of 400-level courses, sr rank or jr rank in Honors College, or perm of chairman. Selected topics in mathematics are studied under guidance of instructor particularly interested in field. (May be repeated for credit.)

MEDICAL TECHNOLOGY

See Zoology

MILITARY SCIENCE

Army ROTC offers two programs in military science which lead to a commission as a second lieutenant in the United States Army. Both programs are open to those interested in a commission in the Regular Army as well as those interested in a commission in the Army Reserve.

The four-year program consists of the basic course (MSc 101-102-103, 110A-B-C, 201-202-203 and 210A-B-C) taken during the freshman and sophomore years, and the advanced course (MSc 301-302-303, 310A-B-C, 330, 401-402-403 and 410A-B-C) taken during the junior and senior years. Students who complete the basic course and are qualified are selected for the advanced course. No obligation is incurred by taking the basic course.

The two-year program is designed specifically to fill the needs of junior college graduates and students of four-year colleges who have not taken ROTC in their first two years. It is composed of a basic summer camp (MSc 230) and the advanced course. Students

interested in entering this program should contact the Military Science Department before February of the year in which they will attend the basic summer camp.

101 Introduction to Military History (1)

(fall) American military history with emphasis on factors contributing to the development of military art as practiced by the U.S. Army. Scheduled concurrently with 110A; meets 1 hr each wk.

102 American Military History I (1)

Prereq: 101 or perm. (winter) Continuation of 101 with emphasis on significant lessons learned from American military history and their importance as guidelines in development of the U.S. Army in the past and future. Meets 1 hr each wk.

103 American Military History II (1)

Prereq: 102 or perm. (spring) Continuation of 102. Meets 1 hr each wk.

110A Leadership Laboratory (0)

Prereq: enrollment in military science basic course. (fall) Basic fundamentals of leadership, drill and exercise of command. Scheduled concurrently with 101. Meets 1 hr each wk.

110B Leadership Laboratory (0)

Prereq: enrollment in 102 or perm. (winter) Evolution of weapons, with stress on modern weapons. Practical exercise in marksmanship, care and maintenance of individual weapons. Meets 1 hr each wk.

110C Leadership Laboratory (0)

Prereq: 110A. (spring) Continuation of 110A. See 110A for description.

201 Introduction to Operations (2)

Prereq: 103 or perm. (fall) Use of maps, aerial photographs and terrain factors to facilitate pursuit of study in other subjects requiring these skills. Scheduled concurrently with 210A. Meets 2 hrs each wk.

202 The U.S. Defense Organization (2)

Prereq: 201 or perm. (winter) Objectives and instruments of national power, strategy and security. Organization, missions and functions of the U.S. Army and roles of other armed services. Meets 2 hrs each wk.

203 Introduction to Tactics (2)

Prereq: 202 or perm. (spring) Small unit tactics, emphasizing importance of firepower, movement and communication. Review of organization of basic military teams and their employment. Meets 2 hrs each wk.

210A Leadership Laboratory (0)

Prereq: 110C. (fall) Continuation of 110A-C with emphasis on functions, duties and responsibilities of junior leaders. Special attention to continued development of leadership potential. Meets 1 hr each wk.

210B Leadership Laboratory (0)

Prereq: 210A. (winter) Continuation of 210A. See 210A for description.

210C Leadership Laboratory (0)

Prereq: 210B. (spring) Continuation of 210A-B. See 210A for description.

230 Basic Army ROTC Summer Camp (0)

Prereq: perm. (summer) 6-wk field training session conducted at an army installation for students entering 2-yr program. Provides necessary instruction to compensate for material covered in 100 and 200-level courses on campus. Must be completed before student enrolls in advanced military science courses. Normally scheduled between soph and jr yrs. Students should apply for admission in January of the year during which they wish to attend summer camp.

301 Leadership and Management I (2)

Prereq: 203 or 230, perm. (fall) Educational psychology and practical application of techniques in planning and presenting instruction, with emphasis on military methods. Meets 2 hrs each wk.

302 Leadership and Management II (2)

Prereq: 301 or perm. Principles and techniques of leadership including basic qualities of leader and special problems of military leadership. Psychological, physiological and sociological factors affecting human behavior and proven techniques of military leadership. Meets 2 hrs each wk.

303 Fundamentals and Dynamics of the Military Team (A) (2)

Prereq: 302 or perm. (spring) Command control, leadership techniques and communications systems used in tactical employment of small units. Meets 2 hrs each wk.

310A Advanced Leadership Laboratory (0)

Prereq: enrollment in military science advanced course. (fall) Development of proficiency and leadership potential by participation in planning and conducting tactical training, drill and ceremonies, and other military subjects. Meets once each wk for 2 hrs.

310B Advanced Leadership Laboratory (0)
Prereq: enrollment in advanced course. (winter) History and roles of combat arms and supporting services, with emphasis on career opportunities for junior officers. Meets 1 hr each wk.

310C Advanced Leadership Laboratory (0)
Prereq: 310A. (spring) Continuation of 310A-B. See 310A for description. Meets 1 hr each wk.

330 Advanced Army ROTC Summer Camp (0)

Prereq: 303. (summer) 6-wk field training session conducted at an army installation; normally scheduled between jr and sr yrs. Includes instruction and application of leadership and military techniques, and performance evaluation of cadets.

401 Leadership and Management III (2)
Prereq: 303 or perm. The United States in contemporary world scene, with emphasis on its impact on leadership and management problems of military services. Meets 2 hrs each wk.

402 Fundamentals and Dynamics of the Military Team (B) (3)

Prereq: 401 or perm. Continuation of 303; staff functions of intelligence and operations, and combining of staff actions, command decisions and tactical employment of units. Decision making and translating decisions into plans and orders emphasized. Meets 3 hrs each wk.

403 Advanced Leadership and Management (2)

Prereq: 402 or perm. (spring) Orientation on military law and the military justice system; and the Army administrative management system. Meets 2 hrs each wk.

410A Advanced Leadership Laboratory (0)
Prereq: enrollment in military science advanced course second yr. (fall) Practical experience as cadet officer in conduct of drill and ceremonies; training management; maintaining discipline, and demonstration of morale and range of factors which affect morale. Meets 1 hr each wk.

410B Advanced Leadership Laboratory (0)
Prereq: second yr advanced course. (winter) Leadership seminar and service orientation.

410C Advanced Leadership Laboratory (0)
Prereq: 410A. (spring) Continuation of 410A-B. See 410A for description.

MODERN LANGUAGES

Modern Languages

Foreign Literatures
in Translation

French

German

Italian

Portuguese

Russian

Spanish

The major requirement for the AB degree is a minimum of 35 quarter hours beyond 241 (Please note: 241 is required as the final intermediate level course for modern language majors). Specific course requirements are 241; 341; 342; 343; 348 or 349; 355; 356, and at least 12 quarter hours at the 400 level which should include courses in both language and literature. Should a student receive a D in a course required for the major, he must repeat the course until he makes at least a C. Majors are strongly urged to study abroad in their junior year in one of the department's centers. Suggested electives for majors are classical languages, comparative literature, cultural anthropology, English, fine arts, history of the country in the student's major interest and linguistics. Language majors should acquire a reading knowledge of a second foreign language.

Requirements for the BS in education degree with a comprehensive program in a modern foreign language are stated in the section of the College of Education. Students wishing to complete teacher certification requirements as AB degree candidates should refer to the Arts and Sciences section of this catalog for an explanation of the requirements. Prospective teachers are urged to spend at least one summer in a country of their major language.

Language laboratory facilities include 150 student booths with individual tape recorders. Classrooms have speakers connected to a high-fidelity central console which can provide recorded material for various classes.

The department has chapters of Delta Phi Alpha and Phi Sigma Iota. Academic-year programs are held in Austria, France and Spain. Summer programs are conducted in Italy, Mexico and the Soviet Union.

For Arts and Sciences foreign language requirements, see the College of Arts and Sciences section of this catalog.

Modern Languages

410 The Language Laboratory (3)

Prereq: foreign language courses numbered 213 or 241, or courses in linguistics. Use of language lab, as correlated with foreign language classroom; instruction in selection, preparation and use of instructional materials and tests and in successful operation of laboratory equipment.

445 Teaching of Modern Foreign Languages (3)

Prereq: jr or sr rank. (fall, spring) Not to be counted for a major in foreign language, nor as hrs above 200 for the AB degree. Study, demonstration and use of methods and materials for effective modern foreign language instruction. Required of majors who plan to teach.

Foreign Literatures in Translation

The lectures and readings for these courses are in English but students will be encouraged to do their reading, in so far as possible, in the original text. These courses are offered in the spirit of the Great Books courses and may be counted as part of the requirements for the humanities of the College of Arts and Sciences. These courses are not to be counted for a major in a foreign language.

335 Italian Literature in Translation (4)

Prereq: jr rank or perm. (as needed)

336 Spanish Literature in Translation (4)

Prereq: jr rank or perm. (as needed)

337 French Literature in Translation (4)

Prereq: jr rank or perm. (as needed)

338 German Literature in Translation (4)

Prereq: jr rank or perm. (as needed)

339 Russian Literature in Translation (4)

Prereq: jr rank or perm. (as needed)

French

111 Elementary French (4)

Prereq: 0-1 yr high school French. Beginning course of a 3-qtr, 1st yr sequence. Basic grammatical concepts and patterns. Emphasis on development of reading, listening, comprehension, speaking and writing skills. Basic text and workbook used. Lab required.

112 Elementary French (4)

Prereq: 111. Continuation of 111. Basic text, workbook and readings used. Lab required.

113 Elementary French (4)

Prereq: 112. Continuation of 112. Basic text, workbook and readings used. Lab required.

211 Intermediate French (4)

Prereq: 113 or 2 or 3 yrs high school French. First course of a 3-qtr intermediate level sequence. Intensive review of grammar. Additional readings with discussion in French. Supplemental cultural material. Lab required.

212 Intermediate French (4)

Prereq: 211 or perm. Continuation of 211.

213 Intermediate French (4)

Prereq: 212 or 4 yrs high school French. Reading and discussion of selected modern works. Completion of 213 fulfills foreign language requirement of the College of Arts and Sciences. Not open to students who have completed 241.

241 Literature and Interpretation (4)

Prereq: 212 or 4 yrs high school French. Contemporary literature, literary analysis and terminology. Majors take 241 instead of 213. Other interested students who made A or B in 212 may also take 241 to fulfill foreign language requirement of the College of Arts and Sciences. Not open to students who have completed 213.

341 Advanced Conversation and Composition (4)

Prereq: 213 or perm. Conversation based on assigned topics. Writing of short compositions which are also discussed in class.

342 Advanced Conversation and Composition (4)

Prereq: 341 or perm. Continuation of speaking with more emphasis on writing skills.

343 Advanced Conversation and Composition (4)

Prereq: 342 or perm. Emphasis on writing.

Modern Languages

348 French Civilization and Culture (3)
Prereq: 241 or perm. (fall, winter) Social, political and cultural history of France from Middle Ages to Revolution. Readings, discussions, class reports and term papers.

349 French Civilization and Culture (3)
Prereq: 241 or perm. (spring) Continuation of 348, covering period from 1799 to present. Problems of France in modern world.

355 Introduction to French Literature (4)
Prereq: 241. Reading and discussion of major French literary works from Middle Ages through 18th century.

356 Introduction to French Literature (4)
Prereq: 241. Extensive reading and discussion of major French literary works of 19th century.

H391 Honors Reading (1)
Prereq: admission to Honors College and perm.

415 French Literature of the Renaissance (4)
Prereq: 355 and 356. (as needed) Major 16th century writers.

416 French Literature of the Renaissance (4)
Prereq: 355 and 356. (as needed) Continuation of 415.

418 French Classicism (4)
Prereq: 355 and 356. (as needed) French literature of 17th century.

419 French Classicism (4)
Prereq: 355 and 356. (as needed) Continuation of 418.

423 18th Century (4)
Prereq: 355 and 356. (as needed) French literature and thought in the Age of Enlightenment.

424 18th Century (4)
Prereq: 355 and 356. (as needed) Continuation of 423.

425 Romanticism (4)
Prereq: 355 and 356. (as needed) Romanticism in drama, poetry and fiction of first half of 19th century.

426 Realism and Naturalism (4)
Prereq: 355 and 356. (as needed) Representative works of Balzac, Stendhal, Flaubert, Zola and Becque.

427 French Poetry in the Second Half of the 19th Century (4)
Prereq: 355 and 356. (as needed) Poetry of Leconte de Lisle, Heredia, Baudelaire, Verlaine, Rimbaud and Mallarmé.

429 20th Century French Literature (4)
Prereq: 355 and 356. (as needed) Novel, drama and poetry in France before WW II.

431 20th Century French Literature (4)
Prereq: 355 and 356. (as needed) Novel, drama and poetry in France since WW II.

433 20th Century French Literature (4)
Prereq: 355 and 356. (as needed) Study in depth of a genre, theme, work or major figure of 20th century.

435 Proseminar (1-4, max 12)
Prereq: perm. Subject will vary. May be repeated when subject changes.

437 Applied Phonetics (3)
Prereq: perm. (fall) Advanced study of International Phonetic Alphabet and transcription practice in French.

439 Modern French Usage (3)
Prereq: 343 or perm. (winter) Finer points of grammar. Practice in composition and analysis of texts.

441 Stylistics (3)
Prereq: 343 or perm. (spring) Translation from English into French. *Explication de texte*. Study of French prosody.

H491 Honors Research (1)
Prereq: admission to Honors College and perm.

German

111 Elementary German (4)
Prereq: 0-1 yr of high school German. Introduction to pronunciation and basic grammar. Development of comprehension and speaking skills. Lab required. Beginning course of a 3-qtr 1st yr sequence.

112 Elementary German (4)
Prereq: 111. Continuation of 111. Lab required.

113 Elementary German (4)
Prereq: 112. Continuation of 112. Continued development of skills of oral and written production and comprehension. Lab required.

211 Intermediate German (4)

Prereq: 113 or 2 or 3 yrs high school German. Continued development of listening comprehension, reading, writing and speaking skills. Grammar review. Lab required. First course of 3-qtr intermediate level sequence.

212 Intermediate German (4)

Prereq: 211 or perm. Continuation of 211. Emphasis on discussion of modern texts. Lab required.

213 Intermediate German (4)

Prereq: 212 or 4 yrs high school German. Modern texts are read and form basis for discussions and written assignments. Completion of 213 fulfills foreign language requirement of the College of Arts and Sciences. Not open to students who have completed 241.

235 German Drama on Stage (2-4)

Prereq: 211. (winter) Presentation of German drama on stage. Private coaching in pronunciation and inflection of German. Credit varies according to role of student.

241 Literature and Interpretation (4)

Prereq: 212 or 4 yrs of high school German. See Fr 241 for description. Not open to students who have completed 213.

341 Advanced Conversation and Composition (4)

Prereq: 213 or perm.

342 Advanced Conversation and Composition (4)

Prereq: 341 or perm.

343 Advanced Conversation and Composition (4)

Prereq: 342 or perm.

348 German Culture and Civilization (3)

Prereq: 241 or perm. (fall, winter) Historical, intellectual and artistic aspects of German, Austrian and Swiss culture from earliest times to present.

349 German Culture and Civilization (3)

Prereq: 241 or perm. (spring) Continuation of 348.

355 Introduction to German Literature (4)

Prereq: 241. From Middle Ages to Classical Period (800-1800).

356 Introduction to German Literature (4)

Prereq: 241. From Romanticism to present.

H391 Honors Reading (1)

Prereq: admission to Honors College and perm.

425 19th Century German Literature (4)

Prereq: 355 and 356. (as needed)

426 19th Century German Literature (4)

Prereq: 355 and 356. (as needed)

427 19th Century German Literature (4)

Prereq: 355 and 356. (as needed)

429 20th Century German Literature (4)

Prereq: 355 and 356. (as needed)

430 20th Century German Literature (4)

Prereq: 355 and 356. (as needed)

431 20th Century German Literature (4)

Prereq: 355 and 356. (as needed)

433 German Lyric Poetry (4)

Prereq: 355 and 356. (as needed) Interpretative and critical study of German lyric poetry.

435 Proseminar (1-4, max 12)

Prereq: perm. Intensive analysis of major author, literary genre or theme. When subject is changed, student may reenroll.

437 Phonology (3)

Prereq: perm. (fall) Problems in description and teaching of German sound system. Training in phonetic and phonemic transcription. Pronunciation drills. Contrastive analysis.

439 Grammatical Structure (3)

Prereq: 343 or perm. (winter) Selected problems in analysis and classroom presentation of German morphology and syntax.

441 Stylistics (3)

Prereq: 343 or perm. (spring) Advanced writing and stylistic analysis. Practice in a variety of nonfiction prose techniques.

447 Readings in German Literature from Periods through the 17th Century (4)

Prereq: 355 and 356. (as needed) Literature of the Courtly Period, Renaissance and Reformation and Baroque.

448 Readings in German Literature from Periods through the 17th Century (4)

Prereq: 355 and 356. (as needed) Continuation of 447.

453 The Age of Goethe (4)

Prereq: 355 and 356. (as needed) Major works of Lessing, Schiller and Goethe.

454 The Age of Goethe (4)

Prereq: 355 and 356. (as needed) Continuation of 453. See 453 for description.

Modern Languages

455 The Age of Goethe (4)

Prereq: 355 and 356. (as needed) Continuation of 453 and 454. See 453 for description.

H491 Honors Research (1)

Prereq: admission to Honors College and perm.

Italian

111 Elementary Italian (4)

Prereq: 0-1 yr high school Italian. (fall) Beginning course of 3-qtr 1st yr sequence.

112 Elementary Italian (4)

Prereq: 111. (winter) Continuation of 111.

113 Elementary Italian (4)

Prereq: 112. (spring) Continuation of 112.

211 Intermediate Italian (4)

Prereq: 113 or 2 or 3 yrs high school Italian. (fall) First course of 3-qtr intermediate level sequence.

212 Intermediate Italian (4)

Prereq: 211 or perm. (winter) Continuation of 211.

213 Intermediate Italian (4)

Prereq: 212 or 4 yrs high school Italian. (spring) Successful completion of 213 fulfills foreign language requirement of the College of Arts and Sciences. Not open to students who have completed 241.

241 Literature and Interpretation (4)

Prereq: 212 or 4 yrs high school Italian. (as needed) See Fr 241 for description. Not open to students who have completed 213.

341 Advanced Conversation and Composition (4)

Prereq: 213 or perm. (fall)

342 Advanced Conversation and Composition (4)

Prereq: 341 or perm. (as needed)

343 Advanced Conversation and Composition (4)

Prereq: 342 or perm. (as needed)

348 Italian Civilization and Culture (3)

Prereq: 213 or perm. (winter) Historical and cultural development of Italy from Middle Ages to Renaissance.

349 Italian Civilization and Culture (3)

Prereq: 213 or perm. (spring) Continuation of 348, covering period from Renaissance to present.

355 Introduction to Italian Literature (4)

Prereq: 241 or perm. (as needed)

356 Introduction to Italian Literature (4)

Prereq: 241 or perm. (as needed)

Portuguese

111 Elementary Portuguese (4)

Prereq: 0-1 yr high school Portuguese. (fall) Beginning course of 3-qtr 1st yr sequence.

112 Elementary Portuguese (4)

Prereq: 111. (winter) Continuation of 111.

113 Elementary Portuguese (4)

Prereq: 112. (spring) Continuation of 112.

211 Intermediate Portuguese (4)

Prereq: 113 or 2 or 3 yrs high school Portuguese. (fall) First course of 3-qtr intermediate level sequence.

212 Intermediate Portuguese (4)

Prereq: 211 or perm. (winter) Continuation of 211.

213 Intermediate Portuguese (4)

Prereq: 212 or 4 yrs high school Portuguese. (spring) Successful completion of 213 fulfills language requirement of the College of Arts and Sciences. Not open to students who have completed 241.

241 Literature and Interpretation (4)

Prereq: 212 or 4 yrs high school Portuguese. (as needed) See Fr 241 for description. Not open to students who have completed 213.

Russian

111 Elementary Russian (4)

Prereq: 0-1 yr high school Russian. (fall) Beginning course of 3-qtr 1st yr sequence.

112 Elementary Russian (4)

Prereq: 111. (winter) Continuation of 111.

113 Elementary Russian (4)

Prereq: 112. (spring) Continuation of 112.

Ohio Program of Intensive English

205 Scientific Russian (3)

Prereq: perm. (on demand) Essentials of technical and scientific reading from modern texts.

211 Intermediate Russian (4)

Prereq: 113 or 2 or 3 yrs high school Russian. (fall) Continued language study. Review of grammar. First course of 3-qtr intermediate level sequence.

212 Intermediate Russian (4)

Prereq: 211 or perm. (winter) Continuation of 211. Extensive reading, writing and oral practice.

213 Intermediate Russian (4)

Prereq: 212 or 4 yrs high school Russian. (spring) Accelerated reading, writing and oral practice. Completion of 213 fulfills foreign language requirement of the College of Arts and Sciences. Not open to students who have completed 241.

241 Literature and Interpretation (4)

Prereq: 212 or 4 yrs high school Russian. (as needed) See Fr 241 for description. Not open to students who have completed 213.

341 Advanced Conversation and Composition (4)

Prereq: 213 or perm. (fall)

342 Advanced Conversation and Composition (4)

Prereq: 341 or perm. (winter)

343 Advanced Conversation and Composition (4)

Prereq: 342 or perm. (spring)

348 The Cultural History of Russia (3)

Prereq: 241 or perm. (fall, winter). Cultural heritage of Russian people. Origin of Russian literature. Russian chronicles. Three cycles of the *bylina*. Russian ballads. Russian folklore. Readings and lectures in Russian.

349 The Cultural History of Russia (3)

Prereq: 241 or perm. (spring) Continuation of 348.

355 Introduction to Russian Literature (4)

Prereq: 241. (as needed) Analysis of genres and literary movements.

356 Introduction to Russian Literature (4)

Prereq: 241. (as needed) Continuation of 355.

H391 Honors Reading (1)

Prereq: admission to Honors College and perm.

397 Introduction to the History of the Russian Language (3)

Prereq: 213 or 241 or 4 yrs high school Russian. (spring) Russian phonology, morphology and syntax from Common Slavic to present. East, West and South Slavic languages.

411 19th Century Russian Poetry (4)

Prereq: 355 and 356. (as needed) Pushkin and Lermontov.

412 19th Century Russian Poetry (4)

Prereq: 355 and 356. (as needed) Continuation of 411.

413 19th Century Russian Poetry (4)

Prereq: 355 and 356. (as needed) Continuation of 411 and 412.

429 Russian Literature in the Soviet Era (4)

Prereq: 355 and 356. (as needed)

430 Russian Literature in the Soviet Era (4)

Prereq: 355 and 356. (as needed) Continuation of 429.

431 Russian Literature in the Soviet Era (4)

Prereq: 355 and 356. (as needed) Continuation of 429 and 430.

435 Proseminar (1-4, max 12)

Prereq: perm. Subject will vary. May be repeated when subject changes.

437 Applied Phonetics (3)

Prereq: perm. (fall)

439 Structure of Modern Russian (3)

Prereq: 343 or perm. (winter) Accurate linguistic description of entire structure of Russian.

441 Stylistics (3)

Prereq: 343 or perm. (spring) Advanced writing and stylistic analysis.

443 19th Century Novel (4)

Prereq: 355 and 356. (fall) Biographies; novels of Gogol, Turgenev and Tolstoy.

444 19th Century Novel (4)

Prereq: 355 and 356. (winter) Continuation of 443.

445 19th Century Novel (4)

Prereq: 355 and 356. (spring) Continuation of 443 and 444.

H491 Honors Research (1)

Prereq: admission to Honors College and perm.

Spanish

111 Elementary Spanish (4)

Prereq: 0-1 yr high school Spanish. Development of comprehension, speaking and reading skills. Basic grammar. Lab required. Beginning course of 3-qtr 1st yr sequence.

112 Elementary Spanish (4)

Prereq: 111. Continuation of 111.

113 Elementary Spanish (4)

Prereq: 112. Continuation of 112.

211 Intermediate Spanish (4)

Prereq: 113 or 2 or 3 yrs high school Spanish. Intensive review of grammar. Additional readings and discussion in Spanish. Supplemental cultural material. Lab required. First course of 3-qtr intermediate level sequence.

212 Intermediate Spanish (4)

Prereq: 211 or perm. Continued review. Additional literary readings with discussion in Spanish.

213 Intermediate Spanish (4)

Prereq: 212 or 4 yrs high school Spanish. Selected readings of 20th century Spanish dramatists, poets, novelists and essayists with discussion in Spanish. Completion of 213 fulfills foreign language requirement of the College of Arts and Sciences. Not open to students who have completed 241.

241 Literature and Interpretation (4)

Prereq: 212 or 4 yrs high school Spanish. See Fr 241 for description. Not open to students who have completed 213.

341 Advanced Conversation and Composition (4)

Prereq: 213 or perm. Conversation based on assigned topics. Writings of short compositions which are also discussed in class.

342 Advanced Conversation and Composition (4)

Prereq: 341 or perm. Continuation of speaking with more emphasis on writing skills.

343 Advanced Conversation and Composition (4)

Prereq: 342 or perm. Emphasis on writing.

348 Spanish Civilization and Culture (3)

Prereq: 241 or perm. (fall, winter) Historical, social, political and cultural readings about Spain.

349 Spanish American Civilization and Culture (3)

Prereq: 241 or perm. (spring) Lectures in Spanish on Indian civilizations, colonial period, 19th and 20th centuries.

355 Introduction to Spanish Literature (4)

Prereq: 241. Reading and discussion of major Spanish literary works from Middle Ages to 18th century.

356 Introduction to Spanish Literature (4)

Prereq: 241. Emphasis on 18th and 19th century writers.

H391 Honors Reading (1)

Prereq: admission to Honors College and perm.

425 19th Century Spanish Literature (1800-1850) (4)

Prereq: 355 and 356. (as needed) Romanticism, *costumbrismo* and other trends in drama, essay and poetry.

427 19th Century Spanish Literature (1850-1900) (4)

Prereq: 355 and 356. (as needed) Emphasis on regionalism and naturalism in the novel.

429 Generation of '98 (4)

Prereq: 355 and 356. (as needed) Representative works by Azorín, Baroja, Machado, Unamuno, Valle-Inclán and other authors.

432 20th Century Spanish Literature (4)

Prereq: 355 and 356. (as needed) Emphasis on drama and poetry. Works by Benavente, Casona, Garcia Lorca and other writers of the Generation of 1927.

433 20th Century Spanish Literature (4)

Prereq: 355 and 356. (as needed) Historical background, theories of literature and literary movements in peninsular literature from 1939 to present.

435 Proseminar (1-4, max 12)

Prereq: perm. Subject will vary. May be repeated when subject changes.

437 Applied Phonetics (3)

Prereq: perm. (fall) Systematic description of segmental and prosodic elements of Spanish system, particularly as contrasted with English.

439 Modern Spanish Usage (3)

Prereq: 343 or perm. (winter) Syntactical and grammatical structure of modern Spanish.

441 Stylistics (3)

Prereq: 343 or perm. (spring) Analysis of literary styles and study of techniques used to acquire correct style in writing Spanish.

443 Survey of Spanish American Literature (4)

Prereq: perm. (fall) Main trends of Spanish American literature from colonial period to *Modernismo*.

444 Survey of Spanish American Literature (4)

Prereq: perm. (winter) Continuation of 443. Main trends of Spanish American literature from *Modernismo* to contemporary period.

447 Themes from Spanish American Prose (4)

Prereq: perm. (as needed)

448 Contemporary Spanish American Literature (4)

Prereq: perm. (as needed)

H491 Honors Research (1)

Prereq: admission to Honors College and perm.

MUSIC

Applied Music

Music Education

Music History and Literature

Music Theory or Composition

Music Therapy

Independent Studies in Music

Applied Music

Fee for private instruction for all applied music (piano, voice, organ, strings, woodwinds, brass, percussion), \$12 per quarter hour.

Note: A description of the proficiency requirements for applied music may be obtained from the School of Music.

090 Performance Laboratory (0)

Required of all undergraduate music majors and students enrolled in 101-102-103 each qtr.

141 Class Piano (1)

Prereq: perm; music majors only. *M. Scheetz.*

141B Class Piano (1)

Prereq: perm; for non-music majors. *M. Scheetz, C. Kasl.*

142 Class Piano (1)

Prereq: perm; 141; music majors only. *M. Scheetz.* Continuation of 141.

142B Class Piano (1)

Prereq: perm; 141B; for non-music majors. *M. Scheetz, C. Kasl.* Continuation of 141B.

143 Class Piano (1)

Prereq: perm; 142; music majors only. *M. Scheetz.* Continuation of 141 and 142.

143B Class Piano (1)

Prereq: perm; 142B; for non-music majors. *M. Scheetz, C. Kasl.* Continuation of 142B.

147 Class Voice (1)

Prereq: perm. *E. Merritt, D. Skentzos, M. Stephenson.* For students enrolling in beginning voice.

148 Class Voice (1)

Prereq: 147. Continuation of 147. See 147 for description.

149 Class Voice (1)

Prereq: 148. Continuation of 147 and 148. See 147 for description.

241 Class Piano (1)

Prereq: 143 or perm; music majors only. *M. Scheetz.*

241B Class Piano (1)

Prereq: 143B or perm; for non-music majors. *M. Scheetz, C. Kasl.*

242 Class Piano (1)

Prereq: 241 or perm; for music majors only. *M. Scheetz.* Continuation of 241.

242B Class Piano (1)

Prereq: 241B or perm; for non-music majors. *M. Scheetz, C. Kasl.* Continuation of 241B.

243 Class Piano (1)

Prereq: 242 or perm; for music majors only. *M. Scheetz.* Continuation of 241 and 242.

243B Class Piano (1)

Prereq: 242B or perm; for non-music majors. *M. Scheetz, C. Kasl.* Continuation of 242B.

244A Marching Band (1, max 12)

Prereq: perm (audition). *G. Thrailkill.* May be repeated.

244B Concert Band (1)

Prereq: perm (audition). *G. Thrailkill.* May be repeated.

244C Symphonic Band (1)

Prereq: perm (audition). *G. Thrailkill.* May be repeated.

Music

245 University Chorus (1, max 12)

Prereq: perm (audition). *M. Wurtz*. May be repeated.

246 Orchestra (1, max 12)

Prereq: perm (audition). *A. Gnam*. May be repeated.

247 Men's Glee Club (1, max 12)

Prereq: perm (audition). *E. Wickstrom*. May be repeated.

248 Women's Glee Club (1, max 12)

Prereq: perm (audition). *D. Skentzos*. May be repeated.

249 Brass Choir (1, max 12)

Prereq: perm (audition). *W. Brophy*. May be repeated.

250 University Singers (1, max 12)

Prereq: perm (audition). *M. Wurtz*. May be repeated.

251 Chamber Orchestra (1, max 12)

Prereq: perm (audition). *A. Gnam*. May be repeated.

252 Opera Workshop (1, max 12)

Prereq: perm (audition). *E. Dybdahl*. May be repeated.

253 Jazz Ensemble (1, max 12)

Prereq: perm (audition). *E. Bastin*. May be repeated.

254 Chamber Music (1, max 12)

Prereq: perm. *L. Conkling*. Participation in playing of standard chamber literature.

340 Voice (1-6)

Prereq: perm. *E. Dybdahl*, *E. Merritt*, *D. Skentzos*, *M. Stephenson*.

341 Piano (1-6)

Prereq: perm. *E. Jennings*, *C. Kasl*, *G. Katz*, *M. Scheetz*, *R. Syracuse*.

342 Harp (1-6)

Prereq: perm. *L. Jennings*.

343 Organ (1-6)

Prereq: perm. *E. Wickstrom*.

244 Violin (1-6)

Prereq: perm. *H. Beebe*.

345 Viola (1-6)

Prereq: perm. *K. Ahrendt*, *H. Beebe*.

346 Violoncello (1-6)

Prereq: perm. *L. Conkling*.

347 Double Bass (1-6)

Prereq: perm. *C. Thompson*.

348 Flute (1-6)

Prereq: perm. *K. Borkowski*.

349 Oboe (1-6)

Prereq: perm. *A. Gnam*.

350 Bassoon (1-6)

Prereq: perm. *H. Robison*.

351 Clarinet (1-6)

Prereq: perm. *D. Lewis*, *H. Robison*.

352 Saxophone (1-6)

Prereq: perm. *A. Gnam*, *D. Lewis*.

353 Trumpet (1-6)

Prereq: perm. *E. Bastin*.

354 French Horn (1-6)

Prereq: perm. *W. Brophy*.

355 Baritone Horn (1-6)

Prereq: perm. *R. Fink*, *R. Smith*.

356 Trombone (1-6)

Prereq: perm. *R. Fink*, *R. Smith*.

357 Tuba (1-6)

Prereq: perm. *R. Fink*, *R. Smith*.

358 Percussion (1-6)

Prereq: perm. *G. Thrailkill*.

451 Accompanying (1, max 3)

E. Jennings. Basic problems in accompanying vocalists and instrumentalists—rehearsal techniques, ensemble, pedaling, balance, etc. May be repeated.

452 Piano Pedagogy (2)

C. Kasl. Presentation of various teaching methods, techniques and repertoire. Selection of teaching materials with general knowledge of various levels of ability and analysis of basic concepts of teaching in reference to purposes or objectives.

453 Piano Pedagogy (2)

Prereq: 452. Continuation of 452. See 452 for description.

454 Piano Pedagogy (2)

Prereq: 453. Continuation of 452 and 453. See 452 for description.

455 Conducting (3)

Prereq: 203, 205, 206. *A. Gnam*. Basic beat patterns, technique of baton and use of left hand. Experience in conducting choral and instrumental ensembles in works suitable for school groups.

456 Choral Conducting (3)

Prereq: 455. *M. Wurtz*. Specialized conducting techniques for choral groups, including experience in conducting works suitable for high school and college groups.

457 Instrumental Conducting (3)

Prereq: 455. *A. Gnam*. Experience in conducting from full score; includes band and orchestral works, suitable for high school groups.

458 Solo Repertoire of Orchestral Instruments (1)

Prereq: 323, perm. Survey of student's major performance instrument literature.

459 Orchestral Instrument Pedagogy (2)

Prereq: perm. Teaching techniques of orchestral instruments and use of selected materials for various levels of ability. Includes practical experience in teaching.

497 Recital (0)

Prereq: perm, jr and sr only. For jr or sr planning to present a public recital and wanting recital recorded on his transcript.

Music Education

160 Music Fundamentals (3)

R. Larsen, J. Scholten. For elementary education majors only.

161 Music for the Classroom Teacher (3)

Prereq: 160 with minimum grade of C. *P. Gagliano, R. Larsen, J. Scholten*. Methods of teaching elementary music. For elementary education majors only.

261 String Methods and Materials (2, max 6)

Prereq: 103, perm. Instruction in stringed instruments with emphasis on teaching techniques, methods and materials.

263 Wind and Percussion Methods and Materials (2, max 12)

Prereq: 103, perm. Instruction in wind and percussion instruments with emphasis on teaching techniques, methods and materials.

364 Secondary School Vocal Techniques and Materials (3)

Prereq: 203, 205, 206, each with minimum grade of C; 455. (winter) *M. Wurtz*. Literature and rehearsal techniques for high school choral groups.

365 Secondary School Vocal Techniques and Materials (3)

Prereq: 364. (spring) Continuation of 364. See 364 for description.

366 Teaching of Music in the Elementary Grades (3)

Prereq: 203, 205, 206, each with minimum grade of C. (fall) *J. Scholten*. Materials and methods for elementary music. For music majors only.

463 Scoring for Bands (3)

Prereq: 203, 304. (spring) *C. Minelli*. Writing techniques for marching and concert bands.

464 Marching Band Techniques (3)

Prereq: 304 or 305; sr rank. (winter) *G. Thrailkill*. Techniques for preparation of high school and college marching band performance.

468 General Music in the Junior High School (3)

Prereq: 203, 205, 206, each with minimum grade of C; sr rank. (winter) *M. Wurtz*. Materials and methods; listening program; changing voice.

476A Music Clinic-Workshop (1-4)

Prereq: sr rank. (summer) May be repeated for credit, but credit may be applied to degree electives only once.

476B Elementary Music Workshop (1-4)

Prereq: sr rank. (summer) May be repeated for credit, but credit may be applied to degree electives only once.

476C Chamber Music Institute (1-4)

Prereq: sr rank. (summer)

Music History and Literature

120 Introduction to Music Literature (2)

Prereq: for non-music major. *K. Ahrendt, E. Wickstrom*. Development of listening skills for understanding elements of musical style in historical perspective and significance of music as a fine art.

121 Introduction to Baroque and Classic Music (2)

Prereq: 120 or perm, for non-music majors. (fall) *K. Ahrendt, E. Wickstrom*. Selected works from music of Baroque and Classic periods.

122 Introduction to the Music of the Romantic Period (2)

Prereq: 120 or perm, for non-music majors. (winter) *K. Ahrendt, E. Wickstrom*. Selected works from music of Romantic period.

123 Introduction to 20th Century Music (2)

Prereq: 120 or perm, for non-music majors. (spring) Selected works from music of 20th century.

321 History and Literature of Music (3)

Prereq: 103. *R. Wetzel*. History of music with survey of musical literature to 1450.

322 History and Literature of Music (3)

Prereq: 321. History of music with survey of musical literature, 1450-1720.

323 History and Literature of Music (3)

Prereq: 322. History of music with survey of musical literature, 1720 to present.

421A The Literature of Vocal Music (3)

Prereq: 323. (fall, 1971).

421B The Literature of Piano Music (3)

Prereq: 323. (winter, 1972).

421C The Literature of Chamber Music (3)

Prereq: 323. (spring, 1972).

421D The Literature of Orchestral Music (3)

Prereq: 323. (fall, 1972).

421E The Literature of Organ Music (3)

Prereq: 323. (winter, 1973).

421F The Literature of Opera (3)

Prereq: 323. (spring, 1973).

201 Harmony (3)

Prereq: 103 (minimum grade of C). *D. Lewis, J. Stewart*. Harmonic and contrapuntal practices of 18th and 19th centuries, including analysis and composition in smaller forms.

202 Harmony (3)

Prereq: 201. Continuation of 201. See 201 for description.

203 Harmony (3)

Prereq: 202. Continuation of 201 and 202. See 201 for description.

204 Dictation and Sight Singing (3)

Prereq: 103 with minimum grade of C or perm. *D. Lewis, S. Kaneshige*. Should be taken concurrently with 201.

205 Dictation and Sight Singing (3)

Prereq: 204. Continuation of 204. See 204 for description.

206 Analysis and Form (3)

Prereq: 202. (spring) *D. Lewis, S. Kaneshige*. Harmonic and structural analysis of larger forms. Should be taken concurrently with 203. 5 days per wk.

301 Advanced Harmony (3)

Prereq: 203, 205, 206 with minimum grade of C in each. *S. Hall*. 19th century chromatic harmony and 20th century harmonic practices.

302 Advanced Harmony (3)

Prereq: 301. Continuation of 301. See 301 for description.

303 Advanced Harmony (3)

Prereq: 302. Continuation of 301 and 302. See 301 for description.

304 Instrumentation (3)

Prereq: 203. (fall) *C. Minelli*. Technical characteristics of instruments of band and orchestra. Arranging for small ensembles.

305 Orchestration (3)

Prereq: 203. (winter) *K. Ahrendt*. Scoring for small, medium and full orchestra.

306 Orchestration (3)

Prereq: 305. (spring) Continuation of 305. See 305 for description.

310 Composition (2)

Prereq: 203, 205, 206. *K. Ahrendt*. Original writing in smaller forms.

311 Composition (2)

Prereq: 310. Continuation of 310. See 310 for description.

Music Theory or Composition

101 Music Theory (3)

Prereq: Music Theory Placement Examination. *S. Kaneshige, J. Stewart*. Melodic, harmonic and rhythmic principles of music and its notation. 5 days per wk.

102 Music Theory (3)

Prereq: 101. Continuation of 101. See 101 for description.

103 Music Theory (3)

Prereq: 102. Continuation of 101 and 102. See 101 for description.

312 Composition (2)

Prereq: 311. Continuation of 310 and 311. See 310 for description.

401 Keyboard Harmony (3)

Prereq: 203. *E. Jennings*. Concentration on functional aspects of piano playing: sight reading, accompanying, transposition, harmonization of melodies, improvisation, keyboard harmony.

407 Counterpoint I (2)

Prereq: 203, 205. (fall) *J. Stewart*. Based on practices and style of Palestrina.

408 Counterpoint II (2)

Prereq: 407. (winter) Continuation of 407. See 407 for description.

409 Counterpoint III (2)

Prereq: 203, 205. (spring) *J. Stewart*. Tonal counterpoint in 2, 3 and 4 voices; modern counterpoint.

410 Composition (2)

Prereq: 312. *K. Ahrendt*. Original writing in larger forms.

411 Composition (2)

Prereq: 410. Continuation of 410. See 410 for description.

412 Composition (2)

Prereq: 411. Continuation of 410 and 411. See 410 for description.

Music Therapy

281 Social and Recreational Instruments and Materials (3)

Prereq: 102 or perm. *R. Gray*. (fall, spring; spring, music majors only)

380 Clinical Experience I (1)

Prereq: perm; not open to fr. *R. Gray*. Selected field experience in approved hospitals.

381 Music Therapy I: Background of Music Therapy (3)

Prereq: 203, 205, 206. (fall) *R. Gray*. Historical review and survey of current trends of music therapy.

382 Music Therapy II: The Influence of Music on Behavior (3)

Prereq: 381, perm. (winter) *R. Gray*. Theoretical bases for influence of music on behavior.

383 Music Therapy III: Problems and Procedures (3)

Prereq: 382, perm. (spring) *R. Gray*.

480 Clinical Experience II (1)

Prereq: Recommendation of adviser. *R. Gray*. Six months as full-time music therapy intern at approved hospital beginning after completion of sr yr in music therapy. Credit, without grade, upon satisfactory completion of internship.

481 Psychological Foundations of Music I (3)

Prereq: 203, 206, 9 hrs of psychology, perm. (winter) *R. Gray*. Nature and extent of psychological investigations bearing upon composition, performance and education in field of music.

482 Psychological Foundations of Music II (3)

Prereq: 481. (spring) Continuation of 481. See 481 for description.

Independent Studies in Music

498 Independent Projects (1-6)

Prereq: perm.

499 Independent Readings in Music (1-12)

Prereq: perm.

NURSING

Both the Zanesville and Portsmouth campuses of Ohio University offer two-year nursing programs. Students who complete the program will receive an associate in science degree in nursing and will be eligible to write the State Board Examination for Registered Nurse.

The Belmont County campus and the Ohio Valley Hospital School of Nursing, Steubenville, have a cooperative nursing program. The Belmont County campus provides the academic credit courses at the hospital that are required for the certificate program. The diploma is granted by the Ohio Valley Hospital School of Nursing.

101 Nursing I (5)

Understanding needs common to all patients and scientific principles involved in nursing

care. Development of nursing skills and application of scientific principles through guided learning experience in the college nursing laboratory and care of selected patients in the clinical laboratory (community hospitals).

102 Nursing II (5)

Major nursing problems of individuals with medical and surgical illness. Emphasis on promotion and maintenance of health as well as preventive measures. Concurrent guided learning experience in community hospitals and health agencies.

103 Nursing III (5)

Continuation of 102. See 102 for description.

201 Nursing IV (6)

Family life cycle, including preparation for marriage, pregnancy, childbirth and child rearing. Emphasis on caring for well family, but consideration given to deviation from normal. Emphasis on prevention through individual as well as community activities.

202 Nursing V (6)

Continuation of 201. See 201 for description.

203 Nursing VI (6)

Major nursing care problems of individuals with mental illness. Emphasis on prevention as well as promotion of mental health for individual and through community activities. Concurrent guided learning experience in community hospitals and health agencies.

204 Nursing VII (6)

Complicated nursing care problems of individuals with medical and surgical illness. Concurrent opportunities to utilize nursing skills and to exercise appropriate judgment through guided learning experience in community hospitals.

205 Nursing VIII (9)

Continuation of 204. See 204 for description.

206 Nursing IX (3)

Exploration of concerns of nursing profession past, present and future. Relationships of technical nurse to health professions and community considered. Future personal development of individual technical nurse discussed.

PHILOSOPHY

The major requirement for the AB degree consists of a minimum of 36 hours, including 310, 312, 320 and at least three courses numbered above 400.

101 Fundamentals of Philosophy (3)

Prereq: Not open to jrs and srs. Basic problems and concepts in philosophy.

102 Principles of Reasoning (3)

Prereq: Not open to jrs and srs. Use of evidence in establishing reliable conclusions.

103 Moral Philosophies (3)

Prereq: Not open to jrs and srs. Types of ethical theory, bases of moral decision and nature of values.

216 Philosophy of Science Survey (3)

M. Rubin. Nontechnical survey of types, testing and credibility of hypotheses; methods of experimental inquiry; measurement; laws, theories and their role in explanation, concept formation.

240 Social Philosophy (3)

E. Smith. Basic types of social and political philosophies, classical and modern.

250 Philosophy of Mind (3)

R. Trevas. Mind-body problem; concept of self; man-machine relation.

260 Philosophy of Religion (3)

S. Grean. Traditional problems in nature of religion, existence and nature of God, problem of evil, immortality and religious language.

301 Introduction (3)

Prereq: Not open to those who have had 101. Analysis of typical philosophical problems arising in study of nature, society and religion for purpose of developing a thoughtful and consistent intellectual perspective.

**310 History of Western Philosophy:
Ancient (5)**

T. Organ. Significant ideas of representative Greek and Roman philosophers.

**311 History of Western Philosophy:
Medieval and Renaissance (3)**

J. Perotti. Augustine to Bruno and Campanella.

**312 History of Western Philosophy:
Descartes to Hume (5)**

R. Wieman.

OHIO PROGRAM OF INTENSIVE ENGLISH

See Linguistics

313 American Philosophy (3)

Prereq: 3 hrs above 200. *I. Murphree, M. Rubin.* Begins with transcendentalism and includes pragmatism, naturalism and idealism.

320 Symbolic Logic I (3)

R. Butrick. Techniques of modern symbolic logic.

330 Ethics (3)

Prereq: Not open to those who have had 103. *R. Saydah.* Comparison of theories of right and good which enter into contemporary thought.

350 Philosophy of Culture (3)

R. Saydah. Philosophical studies of man as a culture-creating being.

351 Philosophy of Language (3)

Prereq: 3 hrs. *E. Smith.* Theories of meaning and reference and their philosophical significance, relations of meaning to verification and truth and relationship between language and concepts.

358 Existentialism (3)

Prereq: 9 hrs. *D. Stewart.* Historical roots of existentialism. Revolt against system, existence, freedom, despair, authenticity, alienation and death, especially in Kierkegaard, Dostoyevsky and Berdyayev.

361 Old Testament (5)

D. Borchert. Background and development of Old Testament; its philosophical, moral and religious significance.

362 New Testament (5)

D. Borchert. Background and development of New Testament; philosophical, moral and religious significance of beliefs of Jesus, Paul and the early Church.

370 History of Religions: India (3)

G. Weckman. Vedic religion, Hinduism, Jainism.

371 History of Religions: Southeast Asia, China and Japan (3)

C. Fu. Buddhism, Taoism, Confucianism, Shinto.

372 History of Religions: Near East (3)

G. Weckman. Zoroastrianism, Judaism, Christianity, Islam.

414 Analytic Philosophy (3)

Prereq: 12 hrs. *E. Smith.* Selected topics in contemporary Anglo-American philosophy from Moore to Wisdom.

415 Contemporary Philosophy (5)

Prereq: 2 courses above 400. Issues from current journal literature.

416 Philosophy of Science (3)

Prereq: 216 and 320. *W. Ruchti.* Selected problems in logic and methodology of sciences.

418 Plato (3)

Prereq: 12 hrs, including 310. *R. Wieman.*

419 Aristotle (3)

Prereq: 12 hrs, including 310. *T. Organ.*

420 Symbolic Logic II (3)

Prereq: 320. *R. Butrick.* Informal and formal deductive systems, logic of relations, class logic.

421 Logical Theory (3)

Prereq: 420 or 3 hrs of mathematics beyond 2nd yr calculus. *R. Butrick, W. Ruchti.* Metamathematics, set theory, proof theory and decision problems.

428 Continental Rationalism (3)

Prereq: 12 hrs, including 312. *R. Trevas.* Descartes, Spinoza, Leibnitz.

429 British Empiricism (3)

Prereq: 12 hrs, including 312. *R. Trevas.* Locke, Berkeley, Hume.

430 Contemporary Ethical Theory (3)

Prereq: 12 hrs, including 103 or 330. Significant current literature in selected topics of moral philosophy.

431 History of Esthetic Theory (3)

Prereq: 12 hrs. *L. Cooper.* Readings from Plato to Dewey and relation of these theories to selected arts and recent criticism.

432 Problems in Esthetics (3)

Prereq: 9 hrs philosophy, literature or art. *L. Cooper.* For students interested in the arts but not necessarily in issues primarily of interest to philosophers. Writings drawn from modern sources on theory of art, esthetic criticism, creativity, truth in art, esthetic value.

438 Kant (3)

Prereq: 12 hrs including 312. *D. Stewart.* Kant's *Critique of Pure Reason* with attention given to Kant's ethical theory.

439 19th Century European Philosophy (3)

Prereq: 12 hrs. *A. Mickunas.* Subjects selected from French, German and British philosophers of 19th century.

Photography

440 Contemporary Social Philosophy (3)

Prereq: 12 hrs, or 6 hrs and 9 hrs of social science. *I. Murphree*.

448 Pragmatism (3)

Prereq: 12 hrs. *I. Murphree, M. Rubin, Peirce, James, Dewey*.

450 Theory of Knowledge (3)

Prereq: 12 hrs, including 312. *D. Lincicome*. Critical examination of various views of what knowledge is and how it is attained.

451 Metaphysics (3)

Prereq: 12 hrs, including 310 or 312. *M. Corrado*. Basic alternative conceptions of world, and such topics as nature of substance, causality, self, freedom, space and time.

458 Contemporary European Philosophy (3)

Prereq: 12 hrs including 358 and 468. *A. Mickunas*. Contemporary east and west European philosophers coming forth from Existential, Phenomenological and Marxian roots and as originators of new philosophic directions.

460 Contemporary Religious Thought (3)

Prereq: 12 hrs. *S. Grean*. Representative thinkers such as Tillich, Buber and others.

468 Phenomenology (3)

Prereq: 12 hrs, including 312. *A. Mickunas*. Method and philosophy of phenomenological movement from Husserl to Merleau-Ponty.

470 Indian Philosophy (3)

Prereq: 12 hrs, including 370. *T. Organ*. Classical Hinduism.

471 Buddhist Philosophy (3)

Prereq: 12 hrs, including 371. *C. Fu*. Abhidharmika, Madhyamika, Yogacara, Zen and other philosophical doctrines of Buddhism.

491 Seminar in Philosophy (5, max 15)

Prereq: 21 hrs. Selected problems.

PHOTOGRAPHY

The major requirement for the BFA degree consists of a minimum of 30 hours beyond 207. Students entering 101 are required to have a suitable camera plus their own processing and enlarging accessories.

101 Basic Photography (3)

Prereq: major or perm. Introduction to art and techniques of photography. 1 lec, 4 lab.

102 Basic Photography (3)

Prereq: 101. Same as 101. See 101 for description.

103 Basic Photography (3)

Prereq: 102. Continuation of 101-102. See 101 for description.

205 Intermediate Photography (5)

Prereq: Basic photography, portfolio and perm. Thorough indoctrination into craftsmanship of medium with emphasis upon esthetic considerations. 3 lec, 4 lab. Majors expected to enroll concurrently in AH 337-339.

206 Intermediate Photography (5)

Prereq: 205. Continuation of 205. See 205 for description.

207 Intermediate Photography (5)

Prereq: 206. Same as 205-206. See 205 for description.

361 Motion Picture Production (5)

Prereq: 207, perm. Motion picture structural theories in practice, elementary scripting, approaches, camera technology, uses of sound, editing techniques, production practices, lab methods. Intensive exercises as individual film maker in production of short motion pictures. 2 lec, 8 lab.

362 Motion Picture Production (5)

Prereq: 361. Continuation of 361. See 361 for description.

363 Motion Picture Production (5)

Prereq: 362. Continuation of 361 and 362. See 361 for description.

371 Advanced Photography (5)

Prereq: dept review of 207 portfolio and perm. Individual problems joined with classroom discussions. 1 lec, 8 lab.

372 Advanced Photography (5)

Prereq: same as 371. See 371 for description.

373 Advanced Photography (5)

Prereq: same as 371. See 371 for description.

377 Combined Applications (5)

Prereq: dept review of 207 portfolio and perm. Fundamentals of portraiture. 2 lec, 6 lab.

378 Combined Applications (5)

Prereq: same as 377. Fundamentals of advertising and commercial work. 2 lec, 6 lab.

379 Combined Applications (5)

Prereq: same as 377. Fundamentals of architectural renditions and industrial. 2 lec, 6 lab.

451 Multiple Images (5)

Prereq: 207. Camera reporting and documentaries; essays and picture stories; book layout; experimental work with multiple images for any desired single or accumulative effect. 2 lec, 6 lab.

452 Multiple Images (5)

Prereq: 207. See 451 for description.

453 Multiple Images (5)

Prereq: 207. See 451 for description.

461 Film Structure: Writing and Editing (3)

Prereq: 363 or equiv. Script writing for dramatic, documentary and implemental films. Structural problems on non-scripted films. Editing organization of picture and sound materials. 1 lec, 4 lab.

462 Film Structure: Writing and Editing (3)

Prereq: 461. Continuation of 461. See 461 for description.

471 Senior Work (5)

Prereq: 15 hrs beyond 207. Individual problems on a seminar basis. 1 lec, 8 lab.

472 Senior Work (5)

Prereq: same as 471. See 471 for description.

473 Senior Work (5)

Prereq: same as 471-472. See 471 for description.

481 Independent Study (1-5)

Prereq: perm before registration. Individual study and practice in a phase of photography under instructor's supervision.

482 Independent Study (1-5)

Prereq: same as 481. See 481 for description.

483 Independent Study (1-5)

Prereq: same as 481-482. See 481 for description.

Physical Science

101 Physical World (4)

Designed for non-science majors. Fundamental ideas of our physical environment introduced through concepts developed from physics and astronomy. Selected topics include measurement, motion, energy and space. 3 lec, 2 lab.

102 Physical World (3)

Prereq: 101 or equiv. Designed for non-science majors. Fundamental ideas of our physical environment introduced through concepts developed from physics and chemistry. Selected topics include atomic structure, periodic classification of elements and chemical reactions. 2 lec, 2 lab.

103 Physical World (3)

Prereq: 101 or equiv. Designed for non-science majors. Fundamental ideas of our physical environment introduced through concepts developed from physics and geology. Selected topics include earth's atmosphere, surface features of earth, rocks and minerals. 2 lec, 2 lab.

H197 Physical World (4)

Prereq: 589 SAT V and Q. (fall) Designed for non-science majors. Fundamental ideas of our physical environment introduced through concepts developed from physics and astronomy. Selected topics include measurement, motion, energy and space. 3 lec, 2 lab.

H198 Physical World (3)

Prereq: 589 SAT V and Q. (winter) Designed for non-science majors. Fundamental ideas of our physical environment introduced through concepts developed from physics and chemistry. Selected topics include atomic structure, periodic classification of elements and chemical reactions. 2 lec, 2 lab.

H199 Physical World (3)

Prereq: 589 SAT V and Q. (spring) Designed for non-science majors. Fundamental ideas of our physical environment introduced through concepts developed from physics and geology. Selected topics include earth's atmosphere, surface features of earth, rocks and minerals. 2 lec, 2 lab.

Physics

The minimum requirement for the AB degree with a major in physics is 36 quarter hours, including a sequence of beginning courses through 253 or 305 and 306. This

PHYSICS

Physical Science

Physics

curriculum can be useful for secondary school science teachers. A student interested in teaching physics at the secondary level should also consult the physics major program listed under the secondary education programs of the College of Education.

The minimum requirement for the BS degree with a major in physics is 54 quarter hours. This must include a sequence of beginning courses through 253 or 305; 306; 311-312; 321-322; 9 hours of courses numbered above 400, and 6 hours of laboratory courses above 400. Extra departmental recommendations include 6 hours of mathematics courses numbered above 300, including vector analysis, and a year of chemistry.

Students preparing for careers in physics in industrial, atomic energy, space science or government laboratories or those who plan to enter graduate study in physics will find a recommended curriculum listed under College of Arts and Sciences. An engineering physics program is also listed under College of Arts and Sciences. Students planning to enter graduate study are urged to acquire a reading knowledge of one modern language such as German, French or Russian. For English composition requirements, see the section for the College of Arts and Sciences.

Completion of the requirements for either the AB or BS degree program above completes the Arts and Sciences College requirement of at least 9 hours in the major at the junior-senior level.

201 Introduction to Physics (4)

(fall, winter) First physics course for pre-professional students; calculus not required. (physics majors, see 305.) Mechanics of solids, heat and thermodynamics. 3 lec, 2 lab.

202 Introduction to Physics (4)

Prereq: 201. (winter, spring) Physics for preprofessional students; calculus not required. (physics majors, see 305.) Electricity and magnetism, waves, sound and light. 3 lec, 2 lab.

203 Introduction to Physics (4)

Prereq: 202. (spring, fall) Physics for pre-professional students; calculus not required. (physics majors, see 305.) Relativity, quanta, atomic and nuclear physics. 3 lec, 2 lab.

251 General Physics (5)

Prereq: Math 263A. Classical and modern physics with calculus and vectors. Newtonian and relativistic mechanics of solids and fluids. 3 lec, 2 lab, 1 recit.

252 General Physics (5)

Prereq: 251 and Math 263B. Classical and modern physics with calculus and vectors. Heat and thermodynamics, electricity and magnetism. 3 lec, 2 lab, 1 recit.

253 General Physics (5)

Prereq: 252. Classical and modern physics with calculus and vectors. Waves (electromagnetic and mechanical), quantum physics, particles, nuclei, atoms and molecules. 3 lec, 2 lab, 1 recit.

305 Intermediate Physics (3)

Prereq: 201, 202, 203, Math 263A. (winter) Preparation for 300 courses for students without credit for 251-252-253. Selected topics in introductory physics presented with calculus and vectors. 3 lec.

306 Intermediate Laboratory (2)

(winter, spring) Fundamental experiments in quantum physics. 4 lab.

311 Mechanics (4)

Prereq: 253 or 305; Math 340 or with Math 340. (fall) Fundamentals of physical mechanics and wave motion, using vector analysis and differential equations. Newton's laws, equilibrium, harmonic and central force motion of particles. 3 lec.

312 Mechanics (4)

Prereq: 311. (winter) Fundamentals of physical mechanics and wave motion, using vector analysis and differential equations. Accelerated reference frames, rigid body motion, wave motion in linear systems. 3 lec.

313 Digital Computing Methods in Physics (3)

Prereq: jr rank in physics. (spring) Practical computer programming (FORTRAN, etc.) with special emphasis on problems in physics.

316 Contemporary Physics for Engineers (3)

Prereq: 253 and Math 263C. (fall, winter) Qualitative ideas and quantitative results of atomic and nuclear physics. Two great successful theories of 20th century physics, quantum theory and relativity, presented with use of elementary calculus. 3 lec.

321 Electricity and Magnetism (4)

Prereq: 253 or 305; Math 340 or with Math 340. (fall) Circuits, electric and magnetic fields. Topics on field sources, potentials, Gauss's law, polarization and dielectrics, magnetic induction, Hall effect. 3 lec.

322 Electricity and Magnetism (4)

Prereq: 321. (winter) Electric and magnetic fields. Topics on magnetic potentials, magnetic forces, Faraday law, magnetic materials, capacitance and inductance, energy of charge and current distributions, time-varying current. 3 lec.

323 Optics (3)

Prereq: 322. (spring) Geometrical and physical optics. Reflection, refraction, lenses, simple aberrations; interference phenomena, scalar diffraction theory; coherence; double refraction, and selected introductory topics in modern optical techniques. 3 lec.

325 Relativity (2)

Prereq: 311 or 321. (spring) Special relativity and Lorentz transformations with applications to selected topics in mechanics, electricity and magnetism and particle physics. 2 lec.

411 Thermodynamics (4)

Prereq: 253 or 305, Math 340. (fall) First and second laws of thermodynamics, phase changes and entropy. Temperature, thermodynamic variables, equations of state, heat engine. 3 lec.

412 Kinetic Theory and Statistical Mechanics (4)

Prereq: 411. (winter) Kinetic theory, transport phenomena and introduction to classical and quantum statistics. 3 lec.

420 Acoustics (3)

Prereq: 311 or 321, Math 340. (spring) Vibration and sound wave propagation. 3 lec.

421 Optics Laboratory (2)

Prereq: 323. (fall) Experiments in geometrical and physical optics including laser experiments. 4 lab.

422 Spectroscopy Laboratory (2)

Prereq: 312 or 322. (winter) Optical and radiofrequency spectroscopy: measurements of energy levels and quantum numbers of physical systems. Absorption and fluorescence, Zeeman effect, Faraday rotation, nuclear magnetic resonance, electron spin resonance. 4 lab.

431 Basic Electrical Measurements Laboratory (3)

Prereq: 253 or 305. (fall) Electrical and electronic measurements and techniques including some basic circuit analysis and amplification techniques. 6 lab.

432 Electronics Laboratory (2)

Prereq: 253 or 305, 431 or perm. (winter) Basic semi-conducting devices, transistors, integrated circuits and their application. 4 lab.

433 Electronics Laboratory (2)

Prereq: 253 or 305, 431 or perm. (spring) Basic instrumentation from dc to microwaves; analog and digital devices. 4 lab.

441 Atomic and Nuclear Laboratory (2)

Prereq: 253 or 305. (fall) X-ray diffraction, polarization and absorption. Measurement of Planck's constant, crystal analysis and other experiments. 4 lab.

442 Atomic and Nuclear Laboratory (2)

Prereq: 253 or 305. (winter) Particle and radiation detectors, Moseley's law, lifetime of mu-meson, neutron activation and half-life determination. 4 lab.

443 Atomic and Nuclear Laboratory (2)

Prereq: 253 or 305. (spring) Magnetic beta-ray spectra, coincidence analysis and angular distribution. 4 lab.

445 Neutron Laboratory (2)

Prereq: 18 hrs over 300. (fall) Selected experiments on neutron interaction with nuclei and with bulk matter. 4 lab.

446 Neutron Laboratory (2)

Prereq: 18 hrs over 300. (winter) Selected experiments on neutron interactions with nuclei and with bulk matter. 4 lab.

451 Quantum Physics (4)

Prereq: 311 or 321 or perm. (fall) Quantum effects in atomic and molecular physics; basic ideas of quantum mechanics; solutions to Schroedinger equation for simple systems. 3 lec.

452 Quantum Physics (4)

Prereq: 451. (winter) Quantum effects in atomic and molecular physics; application of quantum mechanics of interpretation of atomic and molecular spectra and structure. 3 lec.

453 Nuclear and Particle Physics (4)

Prereq: 451. (spring) Descriptive treatment of nuclear phenomena. Elementary theory of nucleon-nucleon interaction. Systematics of nuclear structure (shell model and collective model). Properties and interactions of fundamental particles. Devices and techniques of nuclear and high energy physics. 4 lec.

461 Theoretical Classical Physics (4)

Prereq: 312 and 322. (fall) Advanced topics in mechanics, electricity and magnetism; Lagrange and Hamiltonian methods; Maxwell's equations and electromagnetic radiation. 4 lec.

470 Special Problems (1-4)

Prereq: 22 hrs. Supervised research problems of limited scope in experimental and theoretical physics.

471 Solid State Physics (4)

Prereq: 452, 412. (spring) Fundamental properties of solid state of matter. 4 lec.

493 Undergraduate Seminar (1)

Prereq: jr rank. Important areas of current interest in field of physics, the history of physics, development of ideas in physics and other aspects of physics.

PORTUGUESE

See Modern Languages

PSYCHOLOGY

Two kinds of plans for majors are available in psychology, called "Plan A" and "Plan B."

The Plan A major consists of 45 quarter hours and is intended for students who anticipate applying for graduate study in psychology. Required courses are: (a) General Psychology, 101, five credits; (b) Theoretical Psychology, 15 credits, including 432 or 433 and others chosen from 410, 415, 432, 433, 436, 451, 475, 490B-E; (c) Psychological Methods, 15 credits, including 321, 326 and 341; (d) Learning, 403, five credits; (e) Advanced Psychological Methods, five credits of 390, 401, 412 or 414.

The Plan B major consists of 50 quarter hours and is intended for students who do not intend to pursue graduate study but who want to specialize in some area of psychology. Required courses are: (a) General Psychology, 101, five credits; (b) Psychological Methods, 10 credits including 321 and 341; (c) Theoretical Psychology, five credits chosen from 432, 433 or 415; (d) Learning, five credits chosen from 403 or 404. An additional 25 quarter hours must include ten hours taken from one of the following special interest areas: *speciality in personality*, ten credits from 451, plus either 415, 432 or 433; *speciality in developmental*, ten credits from among 373, 433, 475, 490B-E; *speciality in industrial*, ten credits in 326 and 361; *speciality in experimental*, ten credits, with 326, and either 401, 412 or 414; *speciality in social*, ten credits in 410 and 436. The remaining 15

hours may be taken in the Department of Psychology or in other departments in courses numbered 300 and above, as approved by the student's adviser in psychology. In addition, five credits can be obtained for appropriate on-the-job training related to the student's speciality by registering for Psy 490; a form supplied by the department must be submitted by the student's employer, and the credit in 490 must be approved by the student's adviser.

Completion of the requirements for either Plan A or Plan B automatically completes the Arts and Sciences college requirement of at least nine hours in the major at the junior-senior level.

Total hours for a major in psychology may not exceed 60 quarter hours. Undergraduate majors who contemplate graduate study should prepare themselves in a diversity of fields: modern languages, biological sciences, mathematics, computer science and the social sciences, especially.

101 General Psychology (5)

Introduction to psychology dealing primarily with learning, motivation and sensory processes.

103 Applications of Psychology (4)

Prereq: 101. Development of personality and abilities, individual differences and applications of psychology in business, industry and mental health areas.

321 Elementary Statistics for the Behavioral Sciences (5)

Prereq: 101 and Math 113 with minimum grade of C, or 3 yrs high school mathematics. Measures of central tendency, variability, correlation and simplest tests of hypotheses.

326 Experimental Psychology (5)

Prereq: 321. Training in scientific methods and techniques of modern experimental psychology with individual reports of experiments. 2 lec, 4 lab.

331 Psychology of Adjustment (4)

Prereq: 101. Dynamics, development and problems of human adjustment.

341 Behavioral Measurement (5)

Prereq: 321. Testing and measurement; basic criteria including objectivity, reliability, validity. Methods of test construction and validation, including questionnaire construction.

361 Public-Service Research (5)

Prereq: 101. Applications of psychology in business and industry. For business administration, engineering and technology, public relations, advertising, journalism and psychology

majors. Employee selection, human engineering, attitudes and attitude measurement, psychological aspects of labor relations.

373 Child and Adolescent Psychology (5)

Prereq: 101, not for students with EdEl 200. Behavior from infancy through adolescence.

375 Educational Psychology (5)

Prereq: 101, not open to fr. Psychological foundations of education, with major emphasis upon learning, transfer, motivation and evaluation.

390 Research in Psychology (1-5, max 15)

Prereq: 326, written perm. Supervised independent research on predefined problem.

H397 Psychology for Honors College (5, max 15)

Prereq: admission to Honors College.

401 Experimental Sensory Psychology (5)

Prereq: 326 or 412. Sensory processes, including vision, audition, gustation, olfaction and somesthesia. 2 lec, 3 lab.

403 Learning (5)

Prereq: 9 hrs, perm. Experimental investigation of classical and instrumental conditioning, discrimination learning, generalization, related phenomena.

404 Human Learning (5)

Prereq: 326 or perm. Theoretical and experimental investigations of learning in human beings; concept learning, problem solving, motor skills and language.

407 Psycholinguistics (4)

Prereq: perm. How people produce, understand and acquire language; psychological and linguistic theories. Emphasis on the user of language.

410 Motivation (5)

Prereq: 9 hrs. Scientific study of principles of human action with emphasis on motive, emotion and habit.

412 Physiological Psychology (5)

Prereq: 326. Relationships between integrated behavior and bodily processes in the intact organism.

414 Comparative Psychology (5)

Prereq: 326, perm. Behavior of lower and higher organisms leading up to man. Lec and lab.

415 Psychology of Human Differences (5)

Prereq: 9 hrs including 341 or equiv, jr or sr rank. Extensive survey of quantitative studies dealing with methodology, basic principles and general findings in individual differences in intelligence, personality, interest and perception; group differences of sex, race, class and age.

432 Abnormal Psychology (5)

Prereq: 9 hrs, jr or sr rank. Behavior disorders, their cause and effects on person, family and society.

433 Psychology of Personality (5)

Prereq: 9 hrs, jr or sr rank. Development and organization of personality, with evaluation of major theoretical viewpoints; research on personality structure, dynamics and change.

436 Social Psychology (5)

Prereq: 9 hrs. Behavior of man as influenced by group membership, with emphasis on individual's interaction as basis of change of motives, attitudes and personality.

448 Psychology of Speech (4)

See InCo 452.

451 Introduction to Clinical and Counseling Psychology (5)

Prereq: 432 or 433, jr or sr rank. Diagnostic and remedial procedures and resources; professional problems, duties, skills and inter-professional relationships.

475 Psychology of Exceptional Children (5)

Prereq: 9 hrs including 373 or EdEl 200, jr or sr rank. Not open to those having EDSP 371. Characteristics and problems of exceptional individuals; mentally retarded, mentally superior, highly creative, sensory-handicapped, culturally disadvantaged and emotionally disturbed.

490A Special Problems in Psychology (1-15)

Prereq: written perm. Independent work on special problem with any psychology professor.

**490B Special Problems—
Cognitive Development (3)**

Prereq: 373. Concepts, research findings and theories of cognitive development; memory processes, thinking, intelligence and language.

**490C Special Problems—
Social-Emotional Development (3)**

Prereq: 373. Socialization from theoretical and practical viewpoints; influences of social agencies and peers. Integrates relevant research findings on minority groups.

**490D Special Problems—
Phylogenetic Development (3)**

Prereq: 373. Evolutionary and hereditary bases of human behavior; embryonic and early experience factors relating to behavior development; theoretical issues and research designs.

**490E Special Problems—
Personality Development (3)**

Prereq: 373. Developmental processes as they relate to personality. Major concepts, research findings and theories of personality development.

**490F Special Problems—
Experimental-Social (3)**

Prereq: 436. Advanced methodological and theoretical approaches to selected topics in experimental-social psychology.

**490G Special Problems—Teaching of
Psychology in Secondary Schools (3)**

Prereq: 25 hrs of psychology in the Teaching of Psychology Program, including 375. Effective methods of instruction and evaluation at the high school level. Does not apply to the major, social sciences or Arts and Sciences 200-level requirement.

**H491 Readings in Honors Work
(1-4, max 10)**

Prereq: perm.

**H497 Honors Work in Psychology
(1-4, max 10)**

Prereq: perm.

**H499 Honors Work in Psychology (Thesis)
(3-7, max 15)**

Prereq: perm.

QUANTITATIVE METHODS

310 Production Management (3)

Prereq: jr rank. Emphasis on organization of production function and its relationship to other management functional activities.

354 Introduction to Probability Theory (4)

Prereq: Math 140 sequence, Phil 102. Sets, permutations, combinations. Probability: random variables, axioms, relative frequency, discrete and continuous cases, multidimensional functions, independent and conditional probabilities, moments, law of large numbers, central limit theorem, binomial, normal, Poisson and rectangular distributions.

355 Introduction to Statistical Inference (3)

Prereq: 354. Statistics: sampling, estimation (point and interval), tests of hypotheses, correlation and regression analysis, analysis of variance.

356 Introduction to Production Models (3)

Prereq: 355. Applications of operations research techniques (queueing, network analysis, PERT, linear programming, Markov analysis, simulation, etc.) to improve performance of organizations.

**370 Introduction to Computers and
FORTRAN (4)**

Prereq: Math 113 or equiv. Use of computers in organizations to store, process and deliver data. Information systems, communications, real time and using FORTRAN language to solve problems.

403 Statistical Quality Control (4)

Prereq: 356. Application of sampling theory to quality control: in process control (i.e. control charts) and sampling inspection (i.e. attribute and variable).

411 Production Planning and Control (4)

Prereq: 310. Quantitative techniques used in pre-manufacturing and control phases of production function.

412 Production Management Problems (4)

Prereq: 310. Case studies of production problems in various industries.

425 Advanced FORTRAN (4)

Prereq: 370 or equiv. Deals with application of FORTRAN programming language to problems in marketing, finance, management, accounting and economics.

430 COBOL Programming (4)

Prereq: Math 113 or equiv. Introduction to business-oriented computer language COBOL.

434 Design of Experiments (4)

Prereq: 355 or equiv. Nested, split plot; replicated designs; multi-factor experiments; compounding; fractional factorials; analysis of covariance.

438 Nonparametric Statistics (4)

Prereq: 355 or equiv. Appropriate statistical tests; power; asymptotic efficiency; parametric vs. non-parametric; Fisher's randomization method; run test; multi-sample tests; one-way ANOVA and two-way ANOVA; miscellaneous tests.

441 Multivariate Analysis (4)

Prereq: 355 or equiv. Multivariate normal distribution, chi square and T-tests, discriminant function, principle components, analysis of covariance, applications.

445 Forecasting Business Trends

Prereq: 356 or perm. Forecasting techniques and methodologies considered as tools decision-makers use to provide a basis for determining nature of future environments in which business will have to operate. Forecasting is the means for integrating total corporate planning with technical marketing and financial planning. Cross listed with Mkt 445.

450 Sequential Analysis (4)

Prereq: 355 or equiv. Theory of Wald's sequential probability ratio test, problems of composite hypotheses, Barnard sequential t-test, sequential interval estimation, applications of general sequential theory to special problems.

451 Statistical Survey Techniques (4)

Prereq: 355 or equiv. Techniques of small sample tests applied in opinion polling, business, economics and government.

454 Intermediate Probability Theory (4)

Prereq: 355 or equiv. Random variables — moment generating functions and expected multidimensional (continuous and discrete), values, limiting theorems.

455 Sampling Theory (4)

Prereq: 454. Estimation, tests of hypotheses, sampling, analysis of variance, design of experiments.

456 Regression Analysis (4)

Prereq: 454. Time series analysis, game theory, regression and correlation analysis, and introduction to decision making.

460 Introduction to Decision Theory (4)

Prereq: 355 or equiv. Sequential analysis, game theory, uncertainty due to ignorance of states of nature, utility and strategies.

461 Bayesian Statistics (4)

Prereq: 454. Probability and statistics taught from Bayesian point of view.

462 Bayesian Decision Theory (4)

Prereq: 461. Probability as measure of degree of belief, Bayesian decision criterion, Markov processes, decision trees and value of information.

480 Computer Systems and Design (4)

Prereq: 370 or perm. General discussion of architecture of computer and its auxiliary storage devices; data set organizations; real time; time sharing; assembly languages; compiler programs.

481 Mathematical Methods of Marketing Analysis (4)

Prereq: 356, 370, Mkt 479. Quantitative techniques that can be used in analysis of marketing problems and application of these methods to problem situations. (Taught on team basis with marketing and quantitative methods faculty.) Cross listed with Mkt 481.

485 Simulation (4)

Prereq: 356 or perm. Models of physical systems are constructed and manipulated by computer with application to marketing, finance and management situations.

490 Systems and Procedures (4)

Prereq: 370 or perm. Orderly study of detailed methods for collecting, organizing and evaluating information to improve operations of an organization.

491 Seminar (3, 4 or 5)

Prereq: perm. Selected topics of current interest in quantitative methods area.

493 Readings (1-15)

Prereq: perm. Readings in selected fields of quantitative methods. Topics selected by student in consultation with faculty member.

495 Research (3, 4 or 5)

Prereq: perm. Methodology, analysis of data and preparation of research findings.

497 Independent Research (1-15)

Prereq: perm. Research in selected fields of quantitative methods under direction of faculty member.

RADIO-TELEVISION

105 Introduction to Mass Communication (4)

Development, structure, functions, processes, control and effects of mass media. 4 lec. Identical to Jour 105.

106 Introduction to Radio-Television (4)

Organization, structure and function of broadcasting as a medium of mass communication. 4 lec.

Radio-Television

121 Radio Performance (4)

Responsibilities and skills required of radio performer; practice in performance techniques for radio. 2 lec, 4 lab.

208 Technical Bases of Radio-Television (4)

Principles of electronic reproduction of sound and pictures; characteristics and functions of basic electronic equipment.

310 Principles of Television Production (4)

(fall) Production aspects of television and general principles of equipment operation and crew responsibilities. 2 lec, 4 lab. Not open to radio-television undergraduate majors for credit.

311 Elements of Radio Production (4)

Prereq: 208. Basic elements involved in writing, producing and directing a radio program. 2 lec, 4 lab.

316 Elements of Television Production (4)

Prereq: 208. Basic elements involved in writing, producing and directing a television program. 2 lec, 4 lab.

322 Television Performance (4)

Prereq: 121. Advanced exercises in television performance stressing special problems of video performer. 2 lec, 4 lab.

330 Continuity Writing (4)

Writing for broadcasting, stressing commercial and non-commercial program continuity and announcements, promotional and public service campaigns. 4 lec.

370 Broadcasting and the Public (4)

Interrelationships between broadcaster, government and public; bases for evaluation of role and significance of broadcasting in society. 4 lec.

413 Advanced Radio Production-Direction (4)

Prereq: 311. Investigation of special problems in program development for radio. 2 lec, 4 lab.

417 Television Production-Direction (4)

Prereq: 316. (fall) Analysis of theory and techniques of direction for television. Practice with creative program formats. 2 lec, 4 lab.

418 Advanced Television Production-Direction (4)

Prereq: perm. (winter) Individual and group projects in development (first course) and production (second course) of a television program or series, stressing experimental techniques.

419 Advanced Television Production-Direction (2)

Prereq: 418. (spring) Continuation of 418. See 418 for description.

431 Dramatic and Documentary Writing (4)

Writing and critique of form, structure and presentation of both dramatic and non-dramatic programs and series. 4 lec.

440 Radio and Television in Education (4)

Summary, analysis, application and evaluation of TV and radio in teaching-learning process. 4 lec.

441 Instructional Methods in Educational Radio-Television (4)

Practical applications of television in public school classrooms. Utilization of television programs as an adjunct to instruction. Preparation of instructional units for telecasting. 2 lec, 4 lab.

450 Broadcast Economics (4)

Economic structure of broadcasting industry, economies of its units and its economic relationships with other industries; case studies in budget planning and cost control. 4 lec.

451 Broadcast Management (4)

Functions, structure and organization of broadcasting stations; case studies relating to problems of personnel, sales, programming and management. 5 lec.

452 TV Newsfilm Production and Editing (3)

Prereq: perm. Principles and practices of TV newsfilm production and editing. Similar to Jour 452.

453 Broadcasting Law and Regulations (4)

Socio-political control of broadcasting, effect of laws, regulations and public pressures upon programming policies. 4 lec.

455 Broadcast Programming (4)

Programming concepts, resources, costs, selection and scheduling. Analysis of program in terms of unit structure, appeals and strengths. 4 lec.

457 Broadcast Sales and Sales Management (4)

Problems and practices of television and radio sales and sales management including case studies in sales development, pricing, promotion and other special problem areas. 4 lec.

459 Audience Research (4)

Various methods, techniques and applications of audience study in broadcasting; includes a study of current rating services. 4 lec.

467 Comparative Systems of Broadcasting (4)

(spring) Broadcasting systems of other countries in terms of relevant political, social, economic and cultural influences. 4 lec.

479 History of Broadcasting (4)

Origin of systems of radio and television communication and their development to present. 5 lec.

480 History of Broadcast Programming (4)

Prereq: 479. (winter) Origin and development of radio and television program types and formats.

490 Internship in Broadcasting (12)

Prereq: jrs and srs only, perm. Broadcast industry operation under auspices of a co-operating organization. Concurrent registration in 498 required for grade.

498 Special Problems (2-4, max 12)

Prereq: written proposal and perm. Not open to graduate students.

499 Independent Readings in Radio-Television (2-4, max 12)

Prereq: written proposal and perm. Not open to graduate students.

REGIONAL PLANNING

471 Seminar in Land Use Planning (3)

Prereq: perm. Concept of urban and regional spatial structure (land use); examination of land development processes; examination of methods and techniques of land development plans and policies.

472 Seminar in Land Use Planning (3)

Prereq: 471 (winter) Continuation of 471. See 471 for description.

474 Seminar in Planning Theory (3)

Prereq: perm. Urban settlement, its structure, population and economy and review of some approaches to planning modern cities.

475 Seminar in Planning Theory (3)

Prereq: 474. Continuation of 474. See 474 for description.

RESERVE OFFICERS TRAINING

See Aerospace Studies or Military Science

SOCIAL WORK

The Department of Social Work offers a flexible interdisciplinary curriculum designed to meet the requirements of students desiring to pursue an academic or professional career in some area of social work. This includes not only the established social services but also the newer programs concerned with social change and social policy. Students completing the program will receive a BA degree with a major in social work.

The goal of the curriculum is to develop students capable of using themselves in creative and purposeful ways to combat the manifold and serious social problems that confront our society and its members. Students have considerable latitude in selecting sequences of courses related to their own needs and goals; however, students anticipating this major should consult with a member of the department as soon as possible to plan a program which will meet all degree requirements.

Ohio University is a constituent member of the Council on Social Work Education, and our graduates are qualified for full membership in the National Association of Social Workers.

The requirements for a major in social work consist of: a minimum of 28 hours of courses in social work including eight hours of field experience; specific courses in the social sciences—Soc 101, Soc 360, Soc 351 Psy 101, Govt 101 and 102, Econ 101, Anth 270; Biol 101 and 103 and Psy 321 to fulfill part of the natural science requirement; 30 additional hours of social sciences with a minimum of 15 hours in one social science. (Also four courses of those fulfilling the 30 required hours must be above 400); a list of courses in other departments that are particularly relevant to social work may be secured from the Department of Social Work in Gordy Hall; Spanish is recommended for fulfilling the language requirement, and one course in freshman-level English.

390 Social Security System (4)

Programs, policies and problems related to prevention and alleviation of economic insecurity in the United States. Brief comparison with income security in other countries.

391 The American Social Welfare Institution (4)

Prereq: Soc 101 or 301, and 360 SW 390 recommended. Nature of social welfare as a social institution, stressing scope of social welfare activity; historical development; value orientation; response to critical social problems, issues in social policy and emergence of social work as a profession.

392 Contemporary American Social Services (4)

Prereq: 391 or perm. Development of specific social services to meet human needs and evaluation in terms of their relevancy and adequacy in our present society. Individual studies in areas of particular interest (*i.e.*, child welfare, mental health, etc.).

394 Comparative Social Welfare Systems (3)

Prereq: 8 hrs of social welfare. Examination and comparison of social welfare problems and response-systems in various nations, including Canada, Sweden, England, USSR, Yugoslavia and Cuba. Particular attention given to issues of social and economic security, social mobility, crime, health and social policy formation.

**490 Social Work—
The Professional Practice (4)**

Prereq: minimum of 8 hrs of social welfare. Examination of various components of generic social work practice including problem focus, goals, methods, philosophy, values, ethics, knowledge base, etc. Development of particular skills and techniques necessary to problem solving.

491 Field Experience (4)

Prereq: 490 or perm. Assignment to a social agency or related organization to observe and participate in the agency functioning and to carry responsibility for delivery of services. Participation in weekly seminar and scheduled conferences with faculty instructor required.

492 Field Experience (4)

Prereq: 491. Continuation of 491. See 491 for description.

493 Social Policy (4)

Prereq: 491 or perm. Examination of social policy stressing policy development; relationships of policy, goals and organizational structure, and decision-making patterns and role assignments within social welfare organizations and agencies.

498 Independent Studies and Special Projects in Social Work (3-5)

Prereq: 12 hrs in social work or perm. Student responsible for design and implementation of course of study or special project in an area related to social work. Student interested in course must submit proposal for approval by department chairman at least 30 days prior to enrollment in course.

499 Independent Studies and Special Projects in Social Work (3-5)

Prereq: 498. Continuation of 498. See 498 for description.

SOCIOLOGY AND ANTHROPOLOGY

Anthropology

Sociology

A proposed major in anthropology is pending. See department for further information.

The major requirement for the AB degree in sociology is a minimum of 45 quarter hours of courses in sociology, of which at least 16 hours must be at the 400 level, and including: introductory sociology (101 or 302), one course in methods (350 or 351) and one course in theory (403 or 404). (Courses in anthropology count toward the Arts and Sciences social science requirement).

Anthropology

270 Basic Concepts of Anthropology (5)

Prereq: fr, soph, jr rank. Nature of cultural diversity; origins and evolution of man and socio-cultural systems; anthropological explanations of these. Replaces Anth 170.

370 General Anthropology (5)

Sr terminal course in anthropology. Not open to students who have taken 270 or 170.

371 Social Anthropology (4)

Prereq: 170, 270 or 370. Basic social institutions in human societies. Special emphasis upon kinship, political order, economic systems and supernaturalism.

373 Traditional Perspectives in Anthropology (4)

Prereq: 270 or 370. Includes following areas of anthropological concern: nature of scientific inquiry, ethnology (historical school, structural-functional approach, evolutionism, culture and personality, ecology, cognitive anthropology), linguistics, archaeology and physical anthropology.

374 Contemporary Perspectives in Anthropology (4)

Prereq: 270 or 370 and 373. Issues and research of contemporary interest in anthropology. Includes such areas as: economic anthropology, political anthropology, psychological anthropology, applied anthropology, primate behavior studies, palaeoanthropology, etc.

375 Culture and Personality (4)

Prereq: 8 hrs; psychology recommended. Interrelations between personality systems and cultural systems.

377 Peasant Communities (4)

Prereq: 170, 270 or 370. Focuses upon folk component of preindustrial civilized states as preserved into recent and contemporary times.

380 The Africans and Their Cultures (4)

Prereq: 170, 270, 370 or perm. Territorial groupings in Africa by regions and climatic zones; demographic characteristics, racial composition, language families; prehistory and history of Africa. Emphasis on indigenous cultural institutions with particular focus on West Africa.

381 Culture Areas of Sub-Saharan Africa (4)

Prereq: 170, 270, 370 or perm. Descriptive survey of 6 culture areas of Sub-Saharan Africa. Inter-dependence of social forms and ecology; institutions as guides to total ways of life.

382 Prehistory of Europe (4)

Prereq: 170, 270 or 370. Archaeological material of European cultures from the Neolithic to the early Middle Ages, principles of excavation, problems of analysis and research.

385 Cultures of Mainland Southeast Asia (4)

Prereq: 170, 270, 370 or perm. Cultural traditions and systems of Assam, Burma, Thailand, Cambodia, Laos, Vietnam, South China and the Malay Peninsula.

386 Cultures of Island Southeast Asia (4)

Prereq: perm. Cultural traditions and systems of island Malaysia, Indonesia and the Philippines.

387 Cultures of Oceania (4)

Prereq: 170, 270 or 370. Anthropological survey of Melanesia, Polynesia and Micronesia, with emphasis on social structure and religion.

390 Introduction to Physical Anthropology (4)

Prereq: 270 or 370. Basic approach to human paleontology and biology of contemporary man, with emphasis on human development and diversity.

399 Readings in Anthropology (1-3)

Prereq: advance perm. Supervised reading in various fields of anthropology: archaeology, ethnology, linguistics, physical anthropology, social anthropology.

472 History of Anthropological Thought (4)

Prereq: 8 hrs. Introduction to systems of thought as they have developed in physical anthropology, archaeology, ethnology, social anthropology and anthropology as a general field.

476 Culture Contacts and Change (4)

Prereq: 12 hrs. Impacts of cultures upon one another: immediate and subsequent cultural adaptations. Replaces Anth 376.

478 Cultural Ecology (4)

Prereq: 12 hrs. Analysis of mutual and reciprocal relations between socio-cultural systems and other systems in their environment; ecosystems and biotic communities in which human populations are included.

491 Primate Social Organization (4)

Prereq: 8 hrs. Introduction to primate ethology, with reference to development of cultural behavior.

492 Human Evolution (4)

Prereq: 8 hrs. Basic principles of synthetic theory of evolution, development of mammals and evolution of primates, with emphasis on Pongidae and Hominidae.

494 Seminar in Anthropology (4-6)

Prereq: 8 hrs and perm. Selected topics in anthropology.

Sociology

101 Introduction to Sociology (5)

Prereq: fr or soph rank. Nature of human society and factors affecting its development. Fundamental concepts of sociology: culture, personality, groups, institutions.

302 Principles of Sociology (5)

Prereq: jr or sr rank. Same as 101, covered in a more intensive manner. Not open to students who have taken 101.

309 Sociology of Appalachia (4)

Prereq: 101 or perm. Intensive study of Appalachia from sociological perspective. Emphasis on population of Appalachia (number and distribution of inhabitants, characteristics of population, vital processes and migration), "culture of rural poverty," acceptance of innovation and social change in Appalachia, major social institutions in the area and community power structure in Appalachia.

310 Introduction to Social Psychology (4)

Prereq: 101 or 302. Patterning of conduct through social interaction; functional analysis of individual-group relationships in various organizational contexts; current theory and research in the field.

311 Crowd and Mass Behavior (4)

Prereq: 101 or 302. Collective behavior resulting from social unrest; social contagion; formation and behavior of crowds; cults and sects; panic and disaster behavior; various types of mass behavior; impact upon social institutions.

315 The Individual in Mass Society (4)

Prereq: jr or sr rank. Analysis of implication of cultural and social complexity for processes of individuation, identity formation, and identity maintenance. Consideration of simultaneous growth of secondary relations and dissolution of primary relations, and of significance of these to social, psychological and cultural organization as we approach automated society.

320 Introduction to Family Sociology (4)

Prereq: 101 or 302. Cross-cultural analysis of family systems. Primary emphasis on American family: courtship, marriage and family relationship.

323 American Society (4)

Prereq: 101 or 302. Sociological interpretation of American society. Institutional order: family, economy, government, education and stratification. Problem of stability of social and cultural systems.

327 Sociology of Education (4)

Prereq: 101 or 302. School as social institution in relation to community and development of child; comparative systems of education; sociology of learning and teaching.

329 Race and Ethnic Relations (4)

Prereq: 101 or 302. Racial, male-female and ethnic problems in America; causes and consequences of prejudice and discrimination.

340 Population Analysis (4)

Prereq: 101 or 302. Social and cultural determinations and consequences of changes in fertility, mortality and migration. Current and historical national and international population policies and programs.

350 Social Statistics (4)

Prereq: 101 or 302. Principles and procedures in treatment and presentation of quantitative social data. Methods of measuring central tendency, dispersion and association. Scientific sampling, estimation and tests of significance.

351 Elementary Research Techniques (4)

Prereq: 8 hrs. Research techniques in sociology. Research design; collection, recording and analysis of data.

352 Field Studies in Sociology (4)

Prereq: 351. Planning, execution and write-up of an empirical study, utilizing skills developed in 351. Limited class meetings, conferences with instructor, research report.

360 Social Problems (4)

Prereq: 101 or 302. Sociological analysis of major contemporary social problems and issues. Problems such as militarism, poverty, racism, inequality, cybernation, dehumanization, repression and constraint, among others, will be considered. Theories and research on social structure, social policy and social action.

361 Deviant Behavior (4)

Prereq: 8 hrs. Theory and research concerning major types of deviant behavior and societal reaction to such things as criminality, suicide, drug addiction and mental disorders. Causes and consequences of deviant behavior.

362 Criminology (4)

Prereq: 8 hrs. Theories and research in criminal behavior and the societal reaction to criminality. Causes and consequences of crime.

363 Juvenile Delinquency (4)

Prereq: 8 hrs. Theories and research in delinquency. Causes and consequences of delinquent behavior among juveniles.

403 Development of Sociological Thought (4)

Prereq: 8 hrs. Major sociological concerns and concepts in relation to their social-historical setting. Special emphasis upon sociological thought in 18th and 19th centuries. Replaces Soc 303.

404 Modern Sociological Theory (4)

Prereq: 12 hrs. Critical examination of major sociological conceptual frameworks in 20th century. Replaces Soc 304.

405 Readings in Sociology (1-3, max 3)

Prereq: 12 hrs and perm. Independent, directed readings designed to expand student's understanding in selected area of interest. Replaces Soc 305.

406 Proseminar in Sociology (4)

Prereq: 20 hrs. Critical examination of selected theoretical and research problems. Primarily for advanced students in sociology.

407 Social Process and Change in Southeast Asia (4)

Prereq: perm. Social processes and change in traditional institutional and communal patterns in mainland and island regions and differential impact of change upon various groups, personalities and social relationships. Replaces Soc 307.

408 Latin American Society (4)

Prereq: 8 hrs or prev course on Latin America or perm. Intensive study of Latin American society from sociological perspective. Emphasis on contemporary Latin American values, population problems, man-land relations, levels and standard of living, social institutions, urbanization and social change.

412 Public Opinion Process (4)

Prereq: 310 or 311. Attitudes and opinions in relation to formation of public opinion; political socialization and participations; social status, reference groups, decision-making and role of mass media. Structure and process in behavior publics. Replaces Soc 312.

413 Mass Communication (4)

Prereq: 311 or 412. Personal and social functions of content in newspapers, radio, television and film. Types of audiences and communication effects. Organization and control of mass media and problems in evaluation. Replaces Soc 313.

414 Contemporary Social Movements (4)

Prereq: 8 hrs. Organized movements resulting in major social changes; revolutionary, nationalistic, reform; religious agitation, leadership, ideology, case studies of typical movements. Replaces Soc 314.

416 Society and the Individual (4)

Prereq: 8 hrs sociology and psychology or perm. Exploration of compatibilities and/or contradictions in psychological systems, culture and social structure.

419 Small Group (4)

Prereq: 310 or 12 hrs of psychology. Major theories and methods for study of small group as unit of social systems; communication patterns, role definition, leadership, cohesion, etc.; review of current literature. Replaces Soc 319.

421 Comparative Study of Family and Marriage (4)

Prereq: 320 or equiv. Intra-cultural and cross-cultural differences and similarities in marriage patterns and family types, their social and cultural determinants and consequences and their significance for family life. Replaces Soc 321.

422 The American Family System (4)

Prereq: 320 or equiv. Evolution of American family from colonial to present time. Structural and functional trends in light of theory and research. Replaces Soc 322.

424 Urban Sociology (4)

Prereq: 8 hrs. Historical development and recent emergence of city as dominant feature of modern social life. Special emphasis upon demographic and ecological patterns and social organization of urban region. Replaces Soc 324.

425 Rural Sociology (4)

Prereq: 8 hrs. Rural population, community and institutions in America and other societies. Historical developments and current trends. Rural life organizations and movements. Replaces Soc 325.

426 Industrial Sociology (4)

Prereq: 8 hrs. Interrelationship between industrial and social order. Special attention to social organization and processes within formal and informal structure of industrial unit. Replaces Soc 326.

428 Sociology of Religion (4)

Prereq: 8 hrs. Interrelationship between religious institution and social structure from comparative perspective and with particular reference to American society. Replaces Soc 328.

430 Sociology of Organization (4)

Prereq: 8 hrs. Organization and structure of social groups. Basic cultural patterns of economic, kinship and other institutions. Integration and disintegration of social groups and institutions. Replaces Soc 330.

431 Social Stratification (4)

Prereq: 8 hrs. Social and economic classes, castes and other social strata, their origin, changes and correlates in other spheres of society. Replaces Soc 331.

432 Political Sociology (4)

Prereq: 8 hrs. Social and cultural basis of influence, power and authority. Emphasis upon informal aspects of political process in groups and institutions other than government.

433 Sociology of Occupations and Professions (4)

Prereq: 8 hrs. Professionalism as characteristic of modern economic and industrial complexes; popular conception and modern theory; social and technological preconditions; occupation-profession continuum; components, barriers and strategy; mock-professionalism; motivation and satisfaction; controls; professionalism in particular professions.

441 Population Theories (4)

Prereq: 8 hrs. Major theoretical frameworks in population analysis; how they account for changes in fertility, mortality and migration; impact of these changes on human society.

453 Research Problems in Sociology (2-6)

Prereq: 20 hrs including 351 and written perm prior to registration. Individual research in specific problem areas in which student has demonstrated ability and interest. Replaces Soc 353.

464 Social Control (4)

Prereq: 12 hrs. Nature of institutional control and sociocultural constraint as they affect human behavior. Theories and research.

465 Social Change (4)

Prereq: 12 hrs. Dynamics and processes by which social change takes place; innovation and its diffusion, industrialization and modernization, social evolution and revolution, planned change.

SOUTHEAST ASIAN STUDIES

See International Studies

SPANISH

See Modern Languages

STUDY ABROAD

See p. 96.

SWAHILI

See Linguistics

THEATER

100 Introduction to Theater (3)

(fall, spring) *J. Walker*. Basic elements of drama and theater; analysis of script as basis for production. 2 lec, 1 recit.

115A Voice for the Stage (2)

(fall) *V. Hahne*. Individual and group instruction in basic elements of vocal training for the stage; must be taken in sequence.

115B Voice for the Stage (2)

Prereq: 115A. (winter) *V. Hahne*. Continuation of 115A; see 115A for description; must be taken in sequence.

115C Voice for the Stage (2)

Prereq: 115B. (spring) *V. Hahne*. Continuation of 115A-115B; see 115A for description; must be taken in sequence.

116A Body Training (2)

(fall) Individual and group instruction in basic elements of body training for the stage; must be taken in sequence.

116B Body Training (2)

Prereq: 116A. (winter) Continuation of 116A; see 116A for description; must be taken in sequence.

116C Body Training (2)

Prereq: 116B. (spring) Continuation of 116A-116B; see 116A for description; must be taken in sequence.

130A Technical Production: Scenery (3)

(fall) *R. Winters*. Principles of technical production. 3 lec, 1 lab.

130B Technical Production: Lighting (3)

(winter) *S. Abbott*. Principles of technical production. 3 lec, 1 lab.

130C Technical Production: Costume (3)

(spring) *B. Costa*. Principles of technical production. 3 lec, 1 lab.

215 Principles of Acting (3)

Prereq: soph rank; 115A-B-C and 116A-B-C for majors. Elementary principles and techniques of acting.

220 Oral Interpretation (3)

Prereq: InCo 101 or 103. Techniques in oral interpretation and development of intellectual and emotional responsiveness to meaning of literature. 3 lec.

240 Introduction to Child Drama (2)

(winter) *W. Mayhew*. Informal theater by children and formal theater for children; their roles in artistic and educational development of children. 2 lec, 1 lab.

301 Play Production (4)

Fundamentals of theatrical production. Lab experience. Not open to theater majors. 3 lec, 2 lab.

310A Acting Studio (8)

Prereq: Theater major and audition. (fall) *R. Hobbs*. Intensive work in acting through exercises and scene study. Additional training in voice, speech, movement and other craft study related to acting.

310B Acting Studio (8)

Prereq: 310A. Continuation of 310A. See 310A for description.

310C Acting Studio (8)

Prereq: 310B. Continuation of 310A and 310B. See 310A for description.

311 Stage Speech (2, max 6)

Prereq: 115A-B-C; theater major. Principles and practice in vocal action for stage. May be repeated.

312 Stage Movement (2, max 6)

Prereq: 116A-B-C; theater major. Principles and techniques of expressive movement. May be repeated.

315 Intermediate Acting I (3)

Prereq: 115A-B-C; 116A-B-C; 215. Continuation of 215.

316 Intermediate Acting II (3)

Prereq: 315, perm. (winter, spring) Continuation of 315.

330A Stagecraft: Scenery (3)

Prereq: 130A,B,C. *R. Winters*. Procedures and practice in theatrical production; practical crew experience. 2 lec, 4 lab.

330B Stagecraft: Lighting (3)

Prereq: 130A,B,C. *S. Abbott*. Procedures and practice in theatrical production; practical crew experience. 2 lec, 4 lab.

330C Stagecraft: Costume (3)

Prereq: 130A,B,C. *B. Costa*. Procedures and practices in theatrical production; practical crew experience. 2 lec, 4 lab.

332 Theatrical Rendering (3)

Prereq: 330A,B,C. (fall) *R. Lacy*. Drafting, perspective, color and rendering as applied to production design. 2 lec, 2 lab.

333 Historical Bases of Design (4)

Prereq: 330A,B,C. (fall) *R. Winters*. Art history from prehistoric times and application to production design. 4 lec.

337 Basic Makeup (1)

Prereq: theater or communication major. Theory and practice of stage makeup. 1 lec, 1 lab.

340 Dramatic Literature for Children (3)

(fall, spring) *W. Mayhew*. Examination of plays for child audiences and literature for dramatization by children. 3 lec.

350 Playwriting (5)

(fall) Theory and practice of dramatic writing.

370 Theater History I (3)

S. Quinn. Development of theater and drama in the Western world. 370: prehistoric, Greek and Roman periods; 371: Medieval and Renaissance; 372: from Renaissance to modern. 3 lec.

371 Theater History II (3)

Prereq: 370. Continuation of 370. See 370 for description.

372 Theater History III (3)

Prereq: 371. Continuation of 370 and 371. See 370 for description.

390 Individual Projects (1-8, max 8)

Prereq: perm. May be repeated for total of 8 credits. Arranged.

405 Practicum in Management (1-4)

Prereq: perm. May be repeated for a total of 17 credits. Supervised laboratory practice in problems of theater publicity, finance and house management.

410A Advanced Acting Studio (8)

Prereq: 310A,B,C; perm. (fall) *R. Hobbs*. Advanced study in acting and related craft work. Problems of rehearsal and performance.

410B Advanced Acting Studio (8)

Prereq: 410A. Continuation of 410A. See 410A for description.

410C Advanced Acting Studio (8)

Prereq: 410B. Continuation of 410A and 410B. See 410A for description.

413 Acting Internship (3-12)

Prereq: perm.

Theater

415 Practicum in Acting (1-4)

Prereq: perm. May be repeated for a total of 17 credits. Supervised laboratory practice in rehearsal and public performance of roles.

420 Advanced Interpretation (4)

Prereq: 220 or equiv. Analysis and oral presentation of principal types of literature. 3 lec/recit.

421 Methods of Teaching Theater I (3)

Prereq: perm. (fall, spring) *W. Mayhew*. Philosophy of theater education; exploration of teaching methodologies; organization of objectives, content and learning activities.

422 Methods of Teaching Theater II (2)

Prereq: 421 or perm. (winter, spring) *W. Mayhew*. Individual projects in development of study units in theater and related subjects, evaluation procedures and lesson plans.

430 Advanced Stagecraft (4)

Prereq: 330A-B-C, 332. (fall) *R. Lacy, R. Winters, S. Abbott*. Advanced problems of scenery construction, handling and rigging. 2 lec, 2 lab.

431 Theory of Lighting (4)

Prereq: 330A-B-C, 332. (winter) *S. Abbott*. Creative processes in design and execution of lighting for proscenium and non-proscenium forms. 3 lec, 2 lab.

432 Properties and Special Effects (4)

(winter) Problems of properties, sound and special effects. 2 lec, 2 lab.

433 Scene Design (4)

Prereq: 332. (winter) *R. Lacy, R. Winters*. Principles and projects in scene design as a part of production design. 2 lec, 2 lab.

434 Practicum in Production Design (1-4)

Prereq: perm. May be repeated for a total of 17 credits. Supervised laboratory practice in design and execution of scenery, lighting, costumes, properties and sound.

435 History of Costume (4)

Prereq: 330A-B-C. (fall) *B. Costa*. Development of dress and influence of cultural factors from Egyptian and Asian civilizations, including fabrics, accessories and ornamentation. 4 lec.

436 Costume Design (4)

Prereq: 435. (spring) *B. Costa*. Application of principles of design to stage costuming, with emphasis on fabrics, figure drawing and characterization. 2 lec, 2 lab.

438 Advanced Makeup (3)

Prereq: 337, perm. (winter) *B. Costa*. Corrective, 3-dimensional and non-realistic makeup; rubber prosthesis; character analysis. 1 lec, 2 lab.

440 Children's Theater (3)

Prereq: 340 or perm. (fall) *W. Mayhew*. Philosophies and practical production procedures for child audiences. 2 lec, 2 lab.

441 Creative Dramatics (3)

Prereq: 340 or perm. (winter) *W. Mayhew*. Methods and techniques of guiding children through art of creation of informal drama with special emphasis on methodology for elementary teachers. 3 lec.

450 Advanced Playwriting (5)

Prereq: 350 or perm. Special problems in writing the long play.

451 Playwrights Workshop (3, max 9)

Prereq: perm. Practical workshop experience for playwrights, directors and actors with new scripts. May be repeated.

460 Directing I (3)

Prereq: 12 hrs including 215. (fall, winter) Principles and practices of directing for the stage. 3 lec.

461 Directing II (3)

Prereq: 460. (winter, spring) Practical experience in directing for the stage. 4 lab.

465 Practicum in Directing (1-4)

Prereq: perm. May be repeated for a total of 17 credits. Supervised laboratory practice in planning and executing a dramatic production.

470 Greek Theater and Drama (4)

(fall) Drama, theater and audience in ancient Greece. 3 lec.

471 Roman and Medieval Theater (4)

(winter) Intensive study of drama and theater of Rome and Medieval Europe. 3 lec.

472 Renaissance Theater and Drama (4)

(spring) Development of European theater and drama in the Renaissance. 3 lec.

473 Restoration and 18th Century Theater (4)

Drama, theater and audience in England from the Restoration through the 18th century. 3 lec.

474 Baroque European Theater (4)

(fall) Detailed study of theater and drama of Europe in the Baroque period. 3 lec.

475 19th Century European Theater (4)
(winter) Major developments in drama and theater in Europe during the 19th century. 3 lec.

476 Contemporary Theater (4)
(spring) Trends and developments in 20th century theater. 3 lec.

477 American Theater and Drama (4)
Development of theater and drama in North America from colonial to modern times. 3 lec.

498 Advanced Individual Projects
(1-6, max 6)

Prereq: perm. May be repeated for a total of 6 credits. Arranged.

499 Independent Readings (1-12, max 12)
Prereq: perm. May be repeated for a total of 12 credits. Arranged.

MEDICAL TECHNOLOGY

See Zoology and Microbiology

ZOOLOGY AND MICROBIOLOGY

Microbiology

Zoology

Medical Technology

The major requirement for the AB and BS degrees is a minimum of 36 and 45 quarter hours respectively in approved departmental courses. Except where a course is officially waived or substituted because of specific pre-professional curriculum recommendations, every major must include Zool 101, 203, Bot 102, Zool 303, 325 and one quarter of physiology, usually Zool 460, with at least nine hours in zoology numbered 400 or above. The following extra-departmental courses are required: Chem 121-142-143, organic chemistry (at least 301 and 302) and at least Math 113 or its equivalent.

Curricula are outlined in the College of Arts and Sciences section of the catalog for students preparing for medicine, dentistry, physical therapy, medical technology and zoology. Students who substitute a year in medical or dental school for the senior year at Ohio University are credited with 12 hours

toward their major for the AB or BS degree. Those who complete the training in medical technology at Mount Carmel Hospital or at any other hospital approved by the Bureau of Registry and by Ohio University are credited with 48 hours toward the BS degree. Students who wish to teach and to complete requirements for the AB or BS degree with a major in zoology must meet requirements for certification of teaching, as well as the major requirements.

Students can specialize in microbiology within the department by the appropriate choice of courses.

Zoology

101 Principles of Biology (5)

(fall) *W. Witters*. Principles and concepts of life. Emphasis on principles in cellular biology and elementary biochemistry; classical and modern genetics; evolution and ecology. (Same as Bot 101). 3 lec, 2 lab.

103 Human Biology (4)

Prereq: 101 or Bot 101. (winter, spring) *W. Witters*. The effect of man on the ecosystem. Emphasis on contraceptive technology and research, population pressures, pollution problems and drug abuse discussions with emphasis on drug pharmacology and recent research with selected drugs. 3 lec.

203 Principles of Zoology (6)

Prereq: 101 or Bot 101. (winter, spring) *J. Rovner*. Principles of development, anatomy, physiology, behavior and laboratory survey of major phyla. Designed primarily for majors in the sciences and preprofessional students. 4 lab, 4 lec.

300 Elements of Anatomy and Histology (6)

Prereq: 203; not open to fr. (fall) *B. Allen*. Basic tissues and organ systems of human body. For medical technology, prenursing, premortuary and nonscience students. 4 lec, 4 lab.

301 Human Anatomy (6)

Prereq: 101, not open to fr. (fall, winter) *F. Hagerman*. Structure of body systems with particular emphasis on human skeletal and neuro-muscular systems. Cat used for dissection. For physical education and prephysical therapy students only. 3 lec, 6 lab (Same as HPER 301).

303 Comparative Vertebrate Anatomy (6)

Prereq: 203, not open to fr. (winter, spring) *R. Elliott, B. Allen*. Comparative study of

body systems of vertebrates, with lab work covering various type forms. 3 lec, 6 lab.

305 Histological Technique (3)

Prereq: 203, jr or sr rank. (fall) *W. Peterson*. Principles and methods of preparing animal tissues for microscopic study. 1 lec, 4 lab.

325 General Genetics (5)

Prereq: Bot 102 or 203. (fall, spring) *C. Atkins, J. McQuate*. Principles and concepts of genetics as revealed by classical and modern investigation.

326 Laboratory Genetics (4)

Prereq: 325. (winter) *J. McQuate, C. Atkins*. Experiments, primarily with *Drosophila melanogaster*, designed to illustrate principles of genetics. 6 lab.

345 Human Physiology (4)

Prereq: 300 or 301; not open to fr. (spring) *F. Hagerman*. Functions of various systems as applied to the human. Special reference to physiological adaptations to environment and exercise. For education, medical technology, physical education and prephysical therapy students only. (Same as HPER 345.) 4 lec.

346 Human Physiology Laboratory (2)

Prereq: anatomy, 345 or with 345. (spring) *F. Hagerman*. Laboratory experiences designed to complement material covered in 345. For prephysical therapy students; others by perm only. 4 lab.

352 Kinesiology (4)

Prereq: 301. Analysis of human motion based on anatomical and mechanical principles. (Same as HPER 252).

371 Ornithology (4)

Prereq: 10 hrs biological science. (spring) *H. Seibert*. Bird biology, including general anatomy and physiology, migration, classification, life histories. Emphasis on field identification. 2 lec, 3 field work.

H384 Introduction to Zoological Investigation (6)

Prereq: perm. (winter) *W. Witters*. Introduction to modern zoological investigation. Individualized laboratory experiences in instrumentation, data collection, handling and experimental design. Discussion of recent advances in zoological research. 3 lec, 6 lab.

H390 Biology and the Future of man (5)

Prereq: perm. (spring) *W. Witters*. Major topics: contraceptive research and technology, history of population controls, pollution prob-

lems and possible controls, radiobiology, genetic engineering, drug pharmacology and drugs of abuse.

404 Comparative Vertebrate Anatomy—Mammalian (6)

Prereq: 303. (fall) *R. Elliott, B. Allen*. Continuation of 303. Anatomy of mammals with particular emphasis on the cat. 3 lec, 6 lab.

406 Vertebrate Embryology (6)

Prereq: 300 or 303. (winter, spring) *W. Peterson*. Development from gametogenesis to organogenesis in representative vertebrate types with laboratory emphasis given to chick and pig. 4 lec, 4 lab.

408 Histology (6)

Prereq: 303. (winter) *O. Heck*. Cells, tissues and organ systems with regard to their morphological and physiological properties. 4 lec, 4 lab.

427 Molecular Genetics (3)

Prereq: 325 or Bot 431, organic chemistry; perm. (spring) *J. McQuate, C. Atkins*. Gene action and fine structure; biochemistry of heredity; cytoplasmic inheritance. 3 lec.

428 Human Genetics (3)

Prereq: 325. (fall) *J. McQuate*. Genetics of man including normal and abnormal chromosomology; human biochemical genetics; genes in individuals, kindreds, populations and evolution.

430 Invertebrate Zoology I (6)

Prereq: 203, perm. (fall) *W. Hummon*. Structure, function and systematic relationships in invertebrates; Anthropoda, Mollusca and Annelida. 3 lec, 6 lab.

431 Invertebrate Zoology II (6)

Prereq: 430. (winter) *W. Hummon*. Structure, function and systematic relationships in invertebrate phyla not included in 430. 3 lec, 6 lab.

433 General Protozoology (6)

Prereq: 15 hrs. in biological sciences. (fall; alt yrs) *W. Peterson*. Structure, life histories, physiology and relationships of representatives from all major groups of protozoa. 3 lec, 5 lab.

435 General Entomology (6)

Prereq: 203. (spring) *W. Romoser*. Overview of morphology, physiology, systematics and general biology of insects. 3 lec, 6 lab.

436 Insect Morphology (6)

Prereq: 435. (fall; alt yrs) *W. Romoser*. External and internal structure of insects. 3 lec, 6 lab.

437 Medical Entomology (4)

Prereq: 203. (winter) *W. Romoser*. Relationship of insects and related arthropods to human disease. 3 lec.

438 Insect Physiology (3)

Prereq: perm. (fall; alt yrs) *W. Romoser*.

441 Parasitology (6)

Prereq: 203. (spring) *O. Heck*. Etiology of human parasites, their transmission, diagnosis and prevention. 3 lec, 6 lab.

442 Helminthology (6)

Prereq: 203. (fall; alt yrs) *O. Heck*. Biology of parasitic worms with emphasis on physiology, classification, life histories and host response. 3 lec, 6 lab.

445 Physiology of Exercise (4)

Prereq: 345. (winter) *F. Hagerman*. Fundamental concepts describing reaction of organ systems to exercise/muscle metabolism and work evaluation; special reference to physical fitness, sport conditioning and environmental adaptations to exercise. (Same as HPER 414.)

446 Exercise Physiology Laboratory (2)

Prereq: 345, or perm; required for those enrolled in 445/545. (winter) *F. Hagerman*. Laboratory experiences designed to complement 445/545. (Same as HPER 415/515.)

448 Cell Physiology (4)

Prereq: organic chemistry (physics recommended) (spring) *C. Page*. Fundamental processes involving physical and chemical reactions at cellular and molecular levels. Nutrition, energy metabolism, excretion, responsiveness and growth investigated in depth. 4 lec.

449 Cell Physiology Laboratory (4)

Prereq: 448 or with 448, perm. (spring) *C. Page*. Laboratory experiments designed to illustrate experimental bases of principles discussed in 448. 6 hrs lab and arr.

450 Principles of Endocrinology (4)

Prereq: 460 or 448 and organic chemistry. (fall) *P. Jones*. Endocrine control of vertebrate metabolism and reproduction. 4 lec.

451 Endocrinology Laboratory (4)

Prereq: 450. (winter) *P. Jones*. Experimental techniques pertinent to study of endocrine glands including surgical ablation of one or more glands using rat, mouse and rabbit. 6 lab.

452 Advanced Endocrinology (4)

Prereq: 450. (spring) *P. Jones*. Discussions of current research in vertebrate endocrinology. Emphasis on reproduction controls and mechanisms. Replaces former 451. 4 lec.

456 Comparative Neurophysiology (6)

Prereq: 448 or 460, perm. (winter, 1973) *C. Lent, C. Page*. Principles of comparative, integrative neurophysiology, lectures and seminar. 4 lec, 2 sem.

460 Animal Physiology (5)

Prereq: Organic chemistry, (physics, calculus and 448 recommended) (fall) *C. Lent*. General and comparative physiology emphasizing principal functions underlying life processes. Emphases placed on physiological adaptations to environment and neurophysiological systems. 5 lec.

461 Animal Physiology Laboratory (4)

Prereq: 460 or with 460, perm. (fall) *C. Lent, C. Page*. Laboratory exercises designed to illustrate experimental basis of principles covered in 460. 6 and arranged lab.

463 Cell Chemistry (4)

Prereq: Chem 302 recommended, Chem 123 acceptable for HEFN students. (fall) *J. McQuate, J. Wilson*. Chemistry of carbohydrates, lipids, proteins and nucleic acids. Principles of enzyme activity and kinetics; metabolic pathways.

464 Cell Physiology and Biochemistry Laboratory (3)

Prereq: 463 or with 463. (winter, spring) *P. Jones, J. McQuate, J. Wilson*. Basic procedures in qualitative and quantitative analysis of biological compounds. For medical technology students only. 3 lab.

473 Ethology (6)

Prereq: perm. (fall) *J. Rovner*. Analysis of exogenous and endogenous factors which regulate behavior of invertebrates and vertebrates. Emphasis on innate behavior. 4 lec, 4 lab.

475 Animal Ecology (3)

Prereq: 1 yr biological science; perm. (spring) *H. Seibert*. Relation of animals to their habitat, to each other and to man. General principles of terrestrial and aquatic communities, ecosystems and man's involvement. 3 lec.

476 Ecology Laboratory (2)

Prereq: 475 or with 475. (spring) *H. Seibert*. Field course for animal ecology, consisting of visits to and studies of various local terrestrial and aquatic communities. 4 lab.

479 Evolution (4)

Prereq: 325. (fall, winter) *H. Seibert*. Evidence for, and current ideas and research on mechanisms of, organic evolution. 4 lec.

480 Biological Research Methods (2-4)

Prereq: perm.

480.1 Microscopy and Photomicrography (2)

W. Peterson.

480.2 Techniques in Electron Microscopy (3)

(fall) *R. Hikida*. Principles and methods for preparation of biological specimens for ultra-structural analysis and research, and some associated techniques. Instruction in microscope operation and maintenance, and dark-room techniques.

480.3 Neurophysiological Techniques (6)

(winter, 1973) *C. Lent, C. Page*. Intensive examination of electrophysiological techniques employed in neurophysiological research. Emphasis is placed on microelectrode recording methods.

485 Undergraduate Research (1-3, max 12)

Prereq: 20 hrs and 2.5 gpa in zoology, perm from specific professor. Independent research under supervision of staff member.

H485 Undergraduate Research (1-4, max 12)

Prereq: H484, 3.0 gpa in sciences, perm from specific professor. Individualized and directed research. Students select topics or are directed into possible research areas.

H495 Undergraduate Research (Thesis) (3-9, max 15)

Prereq: H485, 3.0 gpa in sciences, sr rank. Independent departmental honors research under supervision of staff member. Student should enroll the qtr he expects to complete his thesis.

Microbiology

310 Elementary Microbiology (4)

Prereq: Bot 101 or Zool 101, Chem 121. (fall, spring) *J. Lawrence, C. Atkins*. Bacteria as living systems; methods for their study, utilization and control. Role of microorganisms in soil, food sanitation and disease. 3 lec, 1 lab.

411 General Microbiology (6)

Prereq: 10 hrs biological science; organic chemistry. (fall) *S. Maier*. Properties of bacteria and other protists and their importance

in our environment. Laboratory training in common bacteriological methods. 3 lec, 6 lab.

412 Microbiological Techniques (4)

Prereq: 411, perm. (winter) *S. Maier*. Gives microbiology major extensive experience in use of bacteriological techniques and equipment; information retrieval. 2 lec, lab arranged.

413 Pathogenic Bacteriology (6)

Prereq: 411. (winter) *J. Lawrence*. Micro-organisms in relation to disease. Disease manifestations, diagnostic and control methods; some aspects of immunity. 3 lec, 6 lab.

415 Immunology (7)

Prereq: 411. (spring) *R. Walker*. Fundamental concepts of immunity, how produced, advantages and disadvantages; fundamental immunological phenomena. 3 lec, 6 and arr lab.

416 Immunochemistry (7)

Prereq: perm. (fall) *R. Walker*. Types of antigens and antibodies; significance in disease and research. Principles and techniques of isolation, purification and assay. Special immunological phenomena. 3 lec, 6 and arr lab.

417 Advanced General Microbiology (6)

Prereq: 411. (fall) *J. Lawrence*. Selected topics: cell structure, staining, sporulation, growth, variation, biochemical tests. Extensive assigned readings in current literatures. 3 lec, 6 lab.

419 Bacterial Physiology (6)

Prereq: 411. (spring) *S. Maier*. Nutrition, function and metabolism of bacteria; pertinent laboratory work illustrating fundamental principles and various experimental techniques. 3 lec, 6 lab.

420 Microbial Genetics (6)

Prereq: Zool 325, 411, biochemistry recommended; perm. (winter) *C. Atkins*. Genetics of bacteria, viruses and selected protists. Techniques and concepts with emphasis on transfer and biochemical expression of genic material. 3 lec, 6 lab.

485 Undergraduate Research (1-3, max 12)

Prereq: 20 hrs and 2.5 gpa in major courses, perm from specific professor. Independent research under supervision of staff member.

H485 Undergraduate Research (1-4, max 12)

Prereq: Zool H384, 3.0 gpa in sciences, perm. Individualized and directed research. Students select topics or are directed into possible research areas.

H495 Undergraduate Research (Thesis)
(3-9, max 15)

Prereq: H485, 3.0 gpa in sciences, sr rank. Independent departmental honors research under supervision of staff member. Student should enroll the qtr he expects to complete his thesis.

Medical Technology

The following courses are offered at Mount Carmel Hospital, Columbus, Ohio. See curriculum in the College of Arts and Sciences section of the catalog.

491 Urinalysis (3)

Physical, chemical and microscopic study of urine.

492 Hematology (8)

Total red and white blood counts, hemoglobin determination, differential counts of white blood cells, sedimentation rates and blood coagulation.

493 Bacteriology, Serology and Parasitology (15)

Review of medical bacteriology with particular emphasis upon and reference to methods of recognition and detection of types of bacteria; methods in which blood serum can be used in recognition and diagnosis of disease; review of parasites pathogenic to man; methods of examining feces; microscopic and bacteriological study of sputum.

494 Chemistry (17)

Methods of blood chemistry determinations; methods of gastric analysis and more complicated chemical procedures for urine and other body products.

495 Blood Banking (4)

Blood typing and cross matching; detection and identification of antibodies; preparation of blood components.

496 Basal Metabolism and Radioisotopes (1)

Methods of determining basal metabolic rate; radioisotopes tracer studies.

Guidelines and General Information



ADMISSION AND FEES

Information for Prospective Undergraduate Students, a bulletin describing the University, its available programs, its admissions procedures and regulations and its history, can be procured by writing to the Office of Admissions, Wilson Hall, Ohio University, Athens, Ohio 45701.

Applications for admission to study at the freshman, sophomore, junior or senior level may be obtained from the Office of Admissions. Application materials and additional information about graduate study are available upon request to the Graduate College.

When to Apply

A person may apply for admission to undergraduate study at any time following his junior year in high school.

New students are admitted to the fall quarter, which opens the fourth week in September; the winter quarter, which opens the first week in January; the spring quarter, which opens the fourth week in March, or the summer quarter, with sessions which open the third week of June and the fourth week of July.

August 1 is the application deadline for the fall quarter. Those needing residence hall space should apply well ahead of this deadline since housing is usually reserved to capacity before this date. Applications for other terms are accepted up to a month before classes begin.

Application Procedures

The applicant's level of formal education and place of residence determine the procedures he follows in applying for admission to the University.

FRESHMAN APPLICANT. If a person (a) has or soon will have a secondary school diploma and (b) has not been enrolled for 12 or more credit hours of course work in a post-secondary institution, he applies as a freshman applicant.

A freshman applicant files (1) an admissions application, accompanied by a \$20 nonrefundable fee; (2) a transcript of all previous high school course work and grades, including rank in class and (3) required test results.

All applicants must submit the Scholastic Aptitude Test (SAT) results. The University recommends the fall test date, although any is acceptable. The high school counselor or the principal's office has information about when and where this test can be taken and how to register for it.

Admission and Fees

Once the necessary information is filed, the application is processed and a decision is made to grant provisional admission, deny admission or defer a decision pending receipt of additional information from the applicant. The applicant receives written notification of the decision.

If provisional admission is granted, the student receives a residence hall contract and a form for submitting his final high school grades, if the latter were not included on the initial transcript. Within about six months of initial registration he also receives a medical report form.

Once these three documents are completed and returned, final approval for registration is granted. The student's credentials are then forwarded to the dean of University College, who invites the student and his parents to participate in an orientation program.

TRANSFER APPLICANT. If a person has been or is registered for 12 or more hours of course work at a post-secondary institution of education, he applies as a transfer applicant. (For credit evaluation see p. 245.)

A transfer applicant files (1) an application form accompanied by a \$20 nonrefundable fee and (2) a transcript from each post-secondary institution in which he has been registered. Neither a high school transcript nor test results are required unless the applicant is specifically requested to file them.

Once provisional admission is granted, the student receives a medical report form to complete and return with any supplemental transcripts required prior to final approval for registration.

Space is available in University residence halls for transfer students and will be mailed by the Housing Office shortly after admission has been granted.

Students who are applying for transfer to the College of Fine Arts are required to submit a portfolio or audition. The student should make his own arrangements for this by contacting the appropriate school in the College of Fine Arts.

APPLICANT FROM ANOTHER COUNTRY. A citizen of another country applies to the director of admissions if interested in undergraduate study; to the dean of the Graduate College if interested in graduate study.

Following initial inquiry about undergraduate study at the University, the applicant receives a Request for Foreign Application Materials. Once this form is returned and approved, he receives an application for admission.

The applicant files (1) an admissions application; (2) complete official transcripts and pertinent certificates for all secondary and post-secondary work; (3) if his native language is not English, results of the Test of English as a Foreign Language (TOEFL), and (4) such evidence as may be required by the University concerning the applicant's ability to meet the financial obligations of a student in the United States. Whenever possible, the applicant should also submit results of the Scholastic Aptitude Test.

Payment of the \$20 nonrefundable application fee may be deferred until registration time.

An official translation must accompany transcripts and certificates which are not in English. *Do not submit documents for which there is only one copy; documents submitted in support of an application cannot be returned.*

TOEFL test dates for the 1971-72 academic year are October 1971 and January, March and June 1972. If further information about TOEFL is not available in your locality, write the Educational Test-

ing Service, Box 592, Princeton, New Jersey 08540, U. S. A. Registration is five weeks prior to exam.

Once admission is granted, the student receives a medical report form, a residence hall contract and an I-20 form to be used in securing a student visa. The medical report form and housing contract are to be completed and returned to the University prior to arrival on campus.

SPECIAL STUDENT. If an applicant (a) wishes to carry a limited number of courses at the University but is not interested at this time in a degree program or (b) does not meet the minimum requirements (see next section) for admission as a regular full-time student but lives within commuting distance of one of the University's campuses, then he may apply for admission as a special student.

Such persons may be cleared for registration upon completion of a special student application and filing of a statement of good standing or an official transcript from the school(s) previously attended. The statement or transcript must include a report of the applicant's grade point average on all credits attempted.

Special students may carry up to 11 credit hours of courses per quarter (compared to the 15-20 hours carried by the full-time student). They are not eligible to live in a University residence hall.

The University currently charges a \$10 nonrefundable application fee for special students.

Admission Requirements

A particular pattern of high school subjects is not required for admission to undergraduate study at Ohio University. However, the following distribution of subject matter prepares a student for the pursuit of any curriculum at the University: three years of English, two years of foreign language, two years of social science, two years of a laboratory science, one year of algebra and one year of plane geometry.

FRESHMAN APPLICANT. Residents of the State of Ohio are admitted as regular full-time or special part-time freshmen on the basis of a prediction of their success in a full-time university program of studies. Non-Ohio residents are considered only for full-time study and must meet higher standards.

The prediction of an applicant's success in a full-time program is based on an evaluation of his previous courses of study, the grades he attained, his rank in class, the school's recommendation, test results and special talents.

If a person does not meet the minimum requirements for full-time study but lives within commuting distance of any campus of the University, he may enroll as a special part-time student.

If an applicant does not meet the minimum requirement for full-time study, is less than 21 years of age and does not live within commuting distance of one of the campuses, he should seek admission to another college or university.

TRANSFER APPLICANT. A cumulative grade point average of 2.0 (on a scale where A is 4, B is 3, C is 2 and so forth) is normally required of the transfer applicant who is a resident of Ohio; a higher average is required of non-residents. For information related to the credit

evaluation and recording of transfer credit, refer to the "Credit and Grading" section of this bulletin.

MEDICAL REQUIREMENTS. A medical history and physical examination report from the family physician is required for admission to the University. This report includes verification that the student has received a smallpox vaccination within the past three years and immunization against tetanus within the past five years.

Each student is also required to take a tuberculosis skin test at the time he first enrolls in the University. If results of this test are positive, the student receives a chest x-ray annually.

A major medical insurance plan, designed to supplement the care provided by the University's Health Center, is mandatory for each full-time student, unless he submits evidence of comparable coverage under a private plan. Annual premium for the University's plan is \$16.

Entrance Medical Requirements

The health service maintains a confidential, continuous health record on each student beginning with the report of medical history and physical examination by the family physician which is required for admission to the University. The medical report includes indication of completion of the required vaccination against smallpox within the past three years and proper immunization against tetanus within the past five years.

Required of each new student is a tuberculosis skin test administered by the University Health Service at the time of entrance to the University. All positive skin test reactors must receive a chest x-ray annually.

Students who resume their studies at Ohio University after an absence of two or more years are required to submit the report of history and physical examination as required of all new students entering the University. A tuberculosis skin test at the time of such reenrollment at the University is also required.

Ohio Residency

In determining whether or not an enrolled student is an Ohio resident for appropriation subsidy purposes, each state-assisted institution will make a determination of fact in accordance with these standards:

1. A minor student under 21 years of age is considered to be an Ohio resident if his parents or his legal guardian have resided in Ohio for 12 consecutive months or more immediately preceding enrollment, or if they reside in Ohio and at least one parent or legal guardian is gainfully employed on a full-time basis in Ohio.
2. An adult student over 21 years of age is considered to be an Ohio resident if he has resided in the state for 12 consecutive months or more immediately preceding enrollment; or if he is gainfully employed on a full-time basis and is residing in Ohio, and is pursuing a part-time program of instruction, and if there is reason to believe that he did not enter Ohio primarily in order to enroll in an Ohio institution of higher education. Teachers taking up residency in Ohio preparatory to teaching in Ohio schools and colleges shall be considered residents of the state for purposes of enrollment during

the summer term immediately preceding the beginning of employment under their contract of professional service.

3. An emancipated minor under 21 years of age may be considered as an adult student in determining residency, provided such minor presents satisfactory evidence that his parents, if living, or guardians have not contributed to his support during the preceding 12 months and do not claim him as a dependent for federal government income tax purposes.

4. A student who enters the State of Ohio from another state for the primary purpose of enrolling in an Ohio institution of higher education shall be considered to be a nonresident student, and shall continue to be considered a nonresident student during the period of continuous enrollment as a full-time student in an Ohio institution of higher education.

5. A student classified as a nonresident student may be reclassified as a resident of Ohio for higher education subsidy purposes if:

- a. the parents of a student under 21 years of age take residence in Ohio and one of the parents is gainfully employed on a full-time basis in Ohio;
- b. the student over 21 years of age presents a clear and convincing evidence to an administrative officer or administrative panel of the institution and there is a finding of exceptional circumstances justifying a change in classification because of having established a separate residence in Ohio for 12 months or more preceding the request for reclassification and because of having made definite commitments to enter into gainful employment in Ohio upon completion of a degree program.

6. The residence status of a married woman student shall be that which would apply to her husband if he were to seek enrollment, except that a woman classified as an Ohio resident immediately prior to her marriage shall continue to be classified as an Ohio resident during her continuous enrollment in an Ohio institution of higher education and during her continuous residence in Ohio.

7. Persons in military service who entered such service as residents of Ohio and their dependents shall be considered residents of Ohio if they provide proof of continued Ohio domicile and of continued voting eligibility in Ohio. Persons in military service and their dependents shall be considered residents of Ohio during the period of active duty assignment and actual residence in Ohio.

8. Alien students admitted to the United States on student visas or other temporary visas shall be classified as nonresident students. Aliens holding immigrant visas may establish Ohio residency in the same manner as citizens of the United States.

9. A student classified as an Ohio resident shall be considered to have lost his status after he or, in the case of a minor, his parents or legal guardian moves his domicile to another state.

It is the responsibility of the student to report a change of residency from that of an Ohio resident to a non-Ohio resident at the Office of Student Records. If the student's residency has changed from that of a non-Ohio resident to an Ohio resident, he should file the appropriate application with the Admissions Office.

Registration Fees

Undergraduate registration fees are payable at the Cashier's Office* prior to the opening of classes and in accordance with instructions issued with registration materials. Checks and money orders should be made payable to Ohio University in the exact amount of the fees. It is important that the student retain all fee receipts.

Payment of fees owed is a prerequisite to official enrollment, and all students should have sufficient funds to cover these expenses. Post-dated checks will not be accepted. Checks issued to the University and not paid on presentation to the bank will automatically cancel any receipts given and result in the assessment of penalties.

Ohio University reserves the right to make, without prior notice, any fee adjustments that may become necessary.

*Branch campus students pay fees at the campuses where they are registered.

The Quarter:

Comprehensive for load of

	Resident of Ohio	Nonresident
11 to 18 hours, inclusive—Athens	\$220.00	\$570.00
—Branches	180.00	530.00

Includes the instructional fee—the general fee, and other special services (such as health, library and testing) and course and laboratory fees. Excludes fees for private instruction as in music and bowling, which are listed in the course descriptions.

Extra fee for each quarter hour in excess of

18 hours—Athens campus	20.00	50.00
—Branch campuses	17.00	47.00

Fee for each hour for load of 1 to 10 hours,

inclusive—Athens campus	20.00	50.00
—Branch campuses	17.00	47.00

Auditors pay fees in full as above.

Correspondence Study:

Registration for each quarter hour	17.50	20.00
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Extension and Evening School Classes:

Registration for each quarter hour	17.00	47.00
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Miscellaneous Fees

Admission application filing fee (nonreturnable)	20.00
Change of course or change of college	2.00
Entrance tests, when not taken at the designated time	2.00
Duplicate official forms, fee receipts, grade report, etc.	2.00
Course credit by examination each quarter hour	5.00

Graduation

Application for degree	
Associate in Arts	7.50
Bachelor's degree	15.00
Master's degree	20.00
Doctoral degree	50.00
Late registration and/or payment	20.00
Reapplication	5.00
Penalty for late application, if approved ..	5.00
Transcript of record	1.00
Vocational counseling fee for students and prospective students	5.00

Refund of Fees

Withdrawal from a course by change order within the approved period specified in the calendar entitles a student to an 80 percent refund if it results in a fee change.

Official withdrawal from the University during any term entitles the student to a refund of 80 percent of the comprehensive fee during the period specified in the calendar. There is no refund after this date.

Once a student has officially registered, a change order must be used to remove or add a course. The change order form is obtained in the office of the dean of his college and must be submitted within 24 hours, after proper approval by the dean, to the Office of Registration. Failure to clear promptly invalidates the change order and results in a grade of F for the course.

If a student withdraws from the University before he completes full payment of fees, he is considered indebted to the University for the amount determined according to the refund regulations.

Special pro rata refund regulations apply to students who are inducted into military service.

Refunds are issued 30 days after date of withdrawal.

Late Registration and Late Payment Policy

Unless in the judgment of the registrar a student's registration has been delayed due to the convenience of the University, a \$20 *late registration fee* will be assessed all students beginning with the first Monday after the opening day of classes of each quarter. No student registration forms will be accepted after the tenth calendar day of the quarter following the opening day of classes.

A *late payment fee* would normally not be applicable since payment is a prerequisite to registration. However, in addition to other service charges a \$20 *late payment fee* will be assessed by the Bursar's Office on all checks returned by a bank after the payment deadline.

REGISTRATION AND PROCEDURES

Registration

Details concerning the registration procedure are given in the schedule of classes which may be obtained at the Office of Registration before each registration.

A student enrolled in the University completes registration for a subsequent quarter in accordance with regulations announced by the Director of Registration.

A former student obtains registration information by calling at the Office of Admissions or by making his request by mail about a month before the opening of the session he wishes to attend.

A new student receives registration information by mail with other admission material.

STUDENT LOAD

With the exception of commuters, all regular students, including those on probation, will usually carry a normal load of 15-18 quarter hours.

Special students will schedule no more than 11 credit hours each quarter.

AUDITING AND VISITING PRIVILEGE

A student may receive permission to audit courses from the dean of his college. The courses must be marked "audit" on registration forms. The fee for auditing is the same as for credit. Changes from audit to credit or from credit to audit are made by change order during the period when changes are permitted.

With the permission of the instructor, a full-time student has the privilege of visiting classes in which he is not registered.

CLASSIFICATION OF STUDENTS

A student who has been regularly admitted to the University and who expects to pursue a degree course is given rank according to the number of quarter hours completed: freshman, 0-44; sophomore, 45-89; junior, 90-134, and senior, 135 and over.

All other students are unclassified. Unclassified students enroll in the University College.

Change Procedures

CHANGE ORDERS

A student who finds it necessary to add a course, withdraw from a course or correct his registration secures a change order in the office of the dean of the college in which he is enrolled. He then consults the designated departmental representative or the instructor of each course being dropped or added. The departmental representative or the in-

structor approves the change by initialing the form. After securing the dean's approval, the student deposits the change-order form in the Office of Registration and pays the change-order fee of \$2 if it was assessed by the dean.

A course may be added only during the first ten calendar days of the quarter.

A course may be dropped any time during the first 21 calendar days of the quarter with no academic penalty. After the 21st day a course may not be dropped except for extenuating circumstances and with explicit approval of the instructor.

CHANGE OF ADDRESS

Forms for reporting a change of home or Athens address are available in the Office of Student Records. A student is responsible for any University office communication sent to him at the last address reported to the Office of Student Records.

CHANGE OF COLLEGE

Application for transfer from one degree college to another is made in the office of the dean of the college in which the student is enrolled and must be made within the first two calendar weeks of each quarter. The change goes into effect when the application, signed by the two deans concerned, has been presented to the Office of Student Records and the transfer fee of \$2 has been paid. A student must fulfill all the requirements of the degree and the college to which he transfers. The change must be completed within two weeks after the opening of a session or the student remains in the college in which he was registered until the next session.

Withdrawal from the University

Application for withdrawal is made on a withdrawal form obtained in the office of the dean of the college in which the student is enrolled. When the request for the withdrawal has been approved by the dean of the college, the order is referred to the Office of Student Records which grants an official withdrawal after it has been determined that all obligations to the University have been met. A refund of registration fees is made according to regulations under "Fees."

Special provisions in respect to credits and refunds apply to students who withdraw because of induction into military service.

PROLONGED ABSENCE FROM THE UNIVERSITY

Students who resume their studies at Ohio University after an absence of two or more years will be required to submit the standard history and physical examination form as required for all new students entering the University.

Transcripts

A copy of a student's record is issued by the Office of Student Records as an official transcript. Transcripts are made only upon request. Each copy of the transcript costs \$1. The transcript carries a statement of good standing except when a student has been dropped from the University because of poor scholarship, nonpayment of fees or unsatisfactory conduct. A student on scholastic probation has his status indicated on his transcript.

CREDIT AND GRADING

Credit

All credit is designated in quarter hours. A quarter hour is the equivalent of one recitation or two or more laboratory periods a week throughout a quarter. The final examinations are held during the last week of a session and all students are required to take the examinations according to the schedule issued by the director of scheduling, i.e., if a final examination is required for that course.

The final examination for honors work must be taken before the opening of the regular examination period. For information concerning honors work, refer to "Departmental Honors Program."

Grading System and Reports

At the close of a session or upon the completion of a course an instructor reports a letter grade indicating the quality of a student's work in the course. Points are assigned for each quarter hour of credit earned, according to the following grading system:

At the close of each session or upon the completion of the course, instructors report a letter grade to indicate the quality of the student's work in a course.

- A...Very high with 4 (four) points per quarter hour attempted
- B...High with 3 (three) points per quarter hour attempted
- C...Average with 2 (two) points per quarter hour attempted
- D...Passing but below the level required for making progress toward graduation with 1 (one) point per quarter hour attempted

F...Not passing, no credit earned and no points awarded but hours attempted added to the attempted total

CR...In addition to the letter grades a report of credit may be made. This is credit without a grade. Credit is added to the hours earned, but not added to the hours attempted for point-hour calculation. Credit is to be used for certain courses and only by prior approval of the Curriculum Council or in certain special cases by the dean of the college.

PR...Progress. This indicates that the student has made progress in the course in which he is registered and in which he has completed a substantial part of the work but has not yet finished the work required for releasing a letter grade.

This designation will not add to the hours attempted and no points will be awarded. Only when the grade is reported would the hours attempted, hours earned and points be made a part of the record. It is assumed that the student will complete the work of the course in the next quarter in which he is enrolled. There will be no obligation on the part of the professor to arrange for work not completed within this time limit.

Other reports which will appear on the student's grade slip but which are not assigned by a faculty member:

AU...Audit

I*...Administrative Incomplete. Given to a student who initially registers for a course but does not officially drop that course by change order. The I* is given by the Office of Academic Records and may be removed in accordance with rules established by the student's college. Until removed, an administrative incomplete will be computed as an "F" in the calculation of the grade-point average.

NC...No Credit. This is a conversion of the F report for freshman who have not yet earned 45 hours of credit. NC will not appear on the student's permanent record.

NR...Report not yet available from the faculty member, a grade not reported for an official enrollment or processing error. Students with a NR (No Report) should report to the Office of Student Records.

P...Conversion of an A,B,C or D letter grade under the pass/fail election.

W...Designation for a course dropped after the first 21 days of a quarter and prior to final examinations.

To facilitate the transition from high school to college and to help establish equal opportunities for those of unequal backgrounds, courses failed in the freshman year will not be recorded on the permanent record (for additional information see the *Ohio University Freshman Orientation and Studies Bulletin*.) Should the student wish to eliminate the hours and points for courses in which he earned D grades when he has earned 45 hours, he may request that the dean of the University College make this change.

The freshman's accumulative average will be computed on hours attempted. A second quarter freshman will be eligible for third quarter enrollment provided he has a total of at least 12 hours of credit earned with grades of D or higher. Retention for the fourth quarter will be based on an accumulation of 24 credit hours earned, of which 12 must be with grades of C or higher.

This program applies to all new freshmen beginning with those entering June, 1970.

THE POINT-HOUR RATIO

The basis for determining scholastic standing is the point-hour ratio. It is obtained by dividing the total number of points earned by the total number of quarter hours attempted.

TRANSFER CREDIT EVALUATION AND RECORDING OF TRANSFER CREDIT

All acceptable transfer credit in which grades of "A", "B" or "C" have been earned is converted to a "T" grade symbol on the student's permanent academic record. The number of quarter hours of credit which were earned is recorded on the academic record, but no quality points are recorded. Transfer students therefore enter Ohio University with no grade point average on the Ohio University academic records.

Normally a "D" grade is not transferable. However, if a "D" grade has been earned in a course which was a specific prerequisite (as stated in the academic catalog of the prior school) to a course in which the student earned a grade of "C" or better, then the course in which the "D" was received will be accepted for credit earned and the "T" grade symbol will be recorded. Students meriting credit under this stipulation must contact the Office of Admissions to receive credit for this course work.

Deans' List

The freshman Deans' List, compiled at the close of each spring quarter, includes the names of all freshmen who have a point-hour ratio of at least 3.3 on a minimum of 45 quarter hours earned. The upperclass Deans' Lists, compiled at the close of each quarter, include the names of all upperclassmen who have a point-hour ratio of at least 3.3 on a minimum of 15 quarter hours of credit earned including 12 hours attempted.

UNIVERSITY AND DEGREE COLLEGE REPORTS

At mid-quarter instructors report to the student his standing in class, if requested by the student to do so.

A final grade report is mailed to each student after the close of a quarter.

Honors

(See Honors College p. 90.)

Probation Regulations

Each student's record is reviewed at the close of each quarter. If a student's cumulative record shows a grade-point deficiency, he is subject to being placed on probation or dropped from the University. The point-hour ratio is obtained by dividing the total number of grade points earned by the total hours attempted. The entire record, including each grade in each course attempted, is used to determine probation status. In determining points each hour of A equals 4, B equals 3, C equals 2, D equals 1 and F equals 0. Hours of CR, PR, P and W are excluded in the computation.

The extent to which a student's record is below a point-hour ratio of 2.0 (C) determines whether he will be dropped, placed on probation or continued on probation. His deficiency is determined by multiplying the total number of hours attempted by two and subtracting from this all

points earned. For example, if a student has attempted 40 hours and has earned 65 points his deficiency is 15: 40×2.0 (the point-hour ratio required for graduation) equals 80; 80 minus 65 points earned equals 15.

DROPPED FROM THE UNIVERSITY

Any student whose grade-point deficiency at the close of a quarter exceeds the number of hours attempted will be dropped from the University. A student may be dropped even though he has not previously been on probation. A student on probation is dropped from the University if his point-grade deficiency has increased and he is not eligible to be removed from probation.

Normally, a petition for reinstatement will not be considered until 12 months after the student was dropped. The student presents the petition to the dean of his college. Only extraordinary circumstances will prompt the committee to consider a petition for second reinstatement, and then not until 24 months after the student was dropped.

A student who is dropped from the University may not enroll for courses on the Athens campus, on a regional campus or in correspondence or extension courses conducted by Ohio University until reinstated.

PROBATION

A student who has attempted fewer than 45 hours is placed on probation when his grade-point deficiency is greater than 12 grade points. This student should note also the University College's policy relating to eligibility for enrollment (above). The student who has attempted 45 or more hours is placed on probation if he has less than a 2.0 average (one or more deficiency points).

PROBATION REMOVED

Probation is removed if a student on probation who has completed no more than 45 hours reduces his grade-point deficiency to 12 or fewer grade points. For the student who has attempted 45 or more hours probation is removed when his point deficiency is reduced to zero.

PROBATION CONTINUED

A student who has been on probation for one quarter may be continued on probation for one additional quarter if his grade-point deficiency has not increased and he is not eligible to be removed from probation. However, at the close of this additional quarter he must be eligible to be removed from probation or he will be dropped from the University.

Class Attendance Policy

Each instructor will convey this policy to his students during the first week of classes each quarter.

INSTRUCTOR'S ATTENDANCE REPORTS

If a student misses the first two class meetings of a course for which he is enrolled, he may be dropped from the instructor's records and will be considered as having dropped the course. Official notice of this action will be sent to the student by the Office of Registration.

Graduation Requirements

Instructors are encouraged to report to the office of the dean of the appropriate college the names of students who are frequently absent. This enables the staff to investigate such cases and to determine what assistance these students may need in dealing with problems outside the classroom.

NOTIFICATION OF CAUSES OF ABSENCE

Under certain conditions a notification of absence enabling a student to make up worked missed may be obtained from the appropriate office. The following rules apply:

A. When a student has participated in an authorized University activity, such as a departmental trip, music or debate activity, ROTC function or athletic trip, the notification should be issued by the sponsoring office.

B. Students absent from class due to hospitalization as inpatients in the Hudson Health Center are NOT issued a notification of class absence. However, students may request that their instructors call the Health Center for verification of the fact they were hospitalized on certain days.

C. Students who receive medical or dental care as outpatients at the Hudson Health Center will not be issued a notification of class absence. However, students may request their instructors to call the Health Center (the attending physician, if possible) for verification of the fact they received outpatient care on a given day. It is assumed students visiting the Health Center as outpatients will do so without missing classes whenever possible.

D. Students who receive medical care from health care personnel or facilities other than the University Health Service are expected to present the instructors of classes necessarily missed for this reason verification of the date(s) they received such care from the physician or dentist attending them.

GRADUATION REQUIREMENTS

Application

A candidate for graduation must make application in the Office of Student Records and pay the application fee not later than the deadline listed in the academic calendar of the quarter in which he plans to graduate. The application fee for a bachelor's degree is \$15 and for an associate in arts degree, \$7.50.

If an applicant fails to meet the requirements for graduation, he may reapply for the quarter in which he plans to complete the requirements. The reapplication fee is \$5.

Scholastic Average

To meet the minimum standards for graduation from Ohio University, a student must have a point-hour ratio of 2.0 (C) on all hours attempted, but including only the final hours and points in repeated courses. A repeated course or a course for which graduation credit is not

allowed will appear on the transcript with a slash mark (/) through the initial grade(s) earned, and only the final hours attempted and/or earned and points for this course will appear in the transcript totals. The need for this 2.0 average applies to the student's total record and to his total major or equivalent as determined by his college.

Major Areas of Study

Requirements for majors and fields of concentration are outlined by the individual colleges. A transfer student whose transcript shows the completion of most or of all the courses in a major area of study may be required by the dean of his college to satisfy the departments concerned that he has met Ohio University's standards in that area before it is recognized for graduation.

Physical Education

Men and women may elect physical education service courses and, subject to exceptions listed by the colleges, apply six hours of this credit toward degree requirements. Students who elect beyond six hours must register as auditors.

See "Service Courses" in the "Courses of Instruction" of this catalog for additional regulations governing service course credit toward the degree requirements.

Residence Requirements for Graduation

The residence requirement is defined as that requirement which stipulates the minimum amount of work (residence credit) that must be completed by the student at Ohio University in order to receive his degree from this institution, when all other requirements for a particular degree program have been met. Residence credit is defined as credit earned by regular enrollment at Ohio University on the Athens campus, on any of the regional campuses, by any of the approved programs abroad, by any approved student teaching, by correspondence study arranged through Ohio University's Division of Independent Study Through Correspondence and Course Credit by Examination, by degree credit earned through continuing education or by any combination of these means of obtaining credit.

The minimum requirement for students who complete fewer than 90 quarter hours at Ohio University is the final year (three quarters) with 45 hours of credit. For a student who completes 90 or more quarter hours of Ohio University credit, the final quarter shall be in residence as defined by the residence requirement above.

If a student begins graduate study before he completes all requirements for a bachelor's degree, residence for the bachelor's degree will be reduced by as many weeks as credit hours of graduate work completed. The number of weeks subtracted will be credited toward the residence requirement for a master's degree if the credit is acceptable in the program approved for graduate work toward a degree. Residence used for meeting requirements for one or more bachelor's degrees may not be used for meeting the residence requirements for a master's degree.

Graduation Requirements

The residence regulations apply to a student who has been approved for graduation *in absentia* and is completing his last year in an accredited professional school, except that the regulations apply to his residence before he leaves the University to attend the professional school.

The residence requirements also apply to the associate in arts degree.

Problems related to the residence requirements should be discussed with the student's academic dean. In certain cases exceptions to the residence requirements may be made.

In Absentia

In absentia permission is obtained in writing from the dean of the college in which the student is enrolled. Application for graduation *in absentia* is made by a student in the Office of Student Records before he leaves the campus. To obtain his bachelor's degree a student who has been approved for the senior-*in-absentia* privilege in an approved professional school must have completed a full year's work of the quality prescribed for the bachelor's degree at Ohio University, and be eligible for advancement without condition to the second year. The official transcript from the school, accompanied by a statement from the dean of the school certifying that he has satisfactorily completed the full year's work and is eligible for advancement without condition to the second year, must be submitted to the Office of Admissions, Ohio University, before the degree-conferring date.

Time Limit

The time limit for fulfilling the published requirements for a degree is five years from the date of first registration in the University. The time limit is enforced by the office of the dean of the student's college. Requirements instituted subsequent to the student's initial registration are applicable at the discretion of the University. The following additional regulations apply.

1. A student who is advanced to a degree college at the end of his first year, and who does not change his major or equivalent, fulfills the requirements in effect at the time he first registered in the University.
2. A student who is retained in the University College for more than one year fulfills the requirements in effect at the time he enters the degree college. If he changes his major or equivalent he fulfills the requirements in effect at the time he makes the change.

A transfer student is governed by the same regulations, except that the number of years in which to complete the degree requirements is reduced by the number of years of transferred work.

Graduation with Honors

A candidate for the bachelor's degree who is graduated with a point-hour ratio of 3.0 up to 3.50 on all hours attempted is distinguished on the commencement program by the notation "with honor," with 3.50 or above, by the notation "with high honor." A student with transferred

credit is similarly distinguished if both his Ohio University record and his cumulative record meet the above requirement.

A candidate who has successfully completed a program of study in honors is distinguished on the commencement program by the notation "with honors in," with the appropriate indication of field in which he has achieved distinction.

In addition, the diploma for the candidate who is graduated "with honor" carries the notation "*cum laude*," "with high honor" the notation "*summa cum laude*" is used.

Granting of Degrees and Commencement

Degrees are granted at the close of each quarter. The annual commencement is held at the close of the spring quarter. Candidates for spring quarter graduation and recipients of degrees at the preceding summer, fall and winter quarters are invited to attend the exercises.

A Second Bachelor's Degree

A student who desires two bachelor's degrees may meet the requirements for them either simultaneously or successively:

(a) If a student desires to complete the requirements for the two degrees conferred on the same date, he must meet the particular subject requirements for both degrees; earn a minimum of 45 approved quarter hours beyond the minimum required for one degree with the requisite scholastic average, both on Ohio University work and on the total record when credit has been transferred from another school, and must have completed a total of 13 quarters of college work or its equivalent, with a minimum of five quarters of residence, or the equivalent, at Ohio University. When the two degrees are offered by different colleges, the student must register in both colleges the quarter in which the degrees are to be conferred.

(b) If a student has met the requirements for two degrees as indicated above and desires to have the degrees conferred in successive quarters, he may do so without further credit or residence. For example, he may have one degree conferred at the end of one quarter and may make application for the second degree in a subsequent quarter.

(c) If a student desires to take a second bachelor's degree after he has received his first, he must complete the subject requirements for the second bachelor's degree, earn a minimum of 45 acceptable quarter hours beyond the requirements for the first degree with the requisite scholastic average and have at least an additional quarter of residence, or equivalent, in the college offering the second degree with the completion of at least 15 acceptable quarter hours.

Course Credit by Examination

In the spring of 1970 a new program was instituted making it possible for a student to earn credit in a wide variety of lower division courses and in selected upper division courses by the taking of a three-hour examination. The program is designed primarily for those students

who have achieved a proficiency level in a given course to acquire credit which will permit them to go on to advanced courses in the same subject or to have time in their academic program to take other work.

The program is available at present only to regularly registered Ohio University students. The fee is \$5 per quarter hour of credit; registration is made in the Office of Independent Study Through Correspondence (Tupper Hall 302) and examinations are administered through that office. Permission must be obtained from the academic dean.

Credit is granted for a grade of D or better with the pass/fail option being available following the University regulations for this option. A grade of F is not recorded but in order for a student to retake a course failed in this program the approval of the department chairman must be secured. In general, the CCE program is not intended to be a way for students to retake an examination for a course previously failed in order to improve a total grade point average but special permission may be secured from the student's college for such an arrangement.

A listing of courses currently offered through CCE is available with additional courses being added by departments on request, especially at the upper division level. The grade received in the course credit by examination program becomes a part of the student's academic record and is used to compute his point-hour ratio.

Reserve Officers Training

Both the Air Force and Army offer a four-year and a two-year program of ROTC education. Both programs lead to commissions as second lieutenant in the respective services. ROTC does not increase the total quarter hours required for most degrees, provided the student effectively utilizes his social science electives for this credit. For details see Reserve Officers' Training section.

Veterans' Benefits

Students eligible for benefits or students having questions about eligibility for benefits under the Veterans Administration should report to the Office of Registration, Ewing Hall 103.

SERVICES FOR STUDENTS

Cocurricular Activities

The Office of Cocurricular Activities is responsible for coordinating the extracurricular program of Ohio University students.

The activities staff members work directly with students, student leaders and advisers. The primary purpose is to maintain channels of communication with students in order that the staff may better advise and support students in their activities on and off campus.

Financial Aids

The primary aim of the financial assistance program at Ohio University is to provide an opportunity for worthy students to enter and continue in higher education.

The financial aid program assists students in furthering their educations through scholarships, loans, grants and employment. In addition to these basic programs, there are a large number of special scholarships, awards and grants offered through various colleges, schools and departments with the University.

Application may be made for a University scholarship, National Defense Student Loan, Law Enforcement Grant, Nursing Student Loan, Ohio Instructional Grant and/or College Work-Study employment and, with the exception of the President's Honor Award, must be accompanied by the submission of a Parents' Confidential Financial Statement.

The total financial aid service also provides a job notice and referral system for both on- and off-campus employment through its Student Employment Office. Although it is not associated with federal financial assistance programs, regular community and on-campus employment for the self-initiating student is a primary source of student aid.

Financial aid applications for prospective freshmen are available after November 1 and no later than February 1, from the Office of Student Financial Aids upon written or personal request. Incoming freshmen must submit applications before February 15 of their senior year in high school.

Additional financial aid information can be found in the Student Financial Aids brochure or by writing Director, Office of Student Financial Aids, Ohio University, Haning Hall, Athens, Ohio 45701.

Health Services

The University Health Service provides a complete outpatient medical clinic and a 90-bed hospital section in the Hudson Health Center. The medical staff includes full-time physicians, a large staff of registered nurses and registered laboratory and x-ray and other ancillary personnel. The Mental Health Clinic and Immunization and Physical Medicine Departments are staffed by appropriate professional personnel. Comprehensive dental care is available through a modern dental facility in the health center. Emergency medical services are available 24 hours a day.

The health program is designed to be a comprehensive program for the prevention and treatment of illness and accidental injuries.

Major surgery and certain special diagnostic procedures which cannot be performed at the center are provided by referral from a staff physician. Costs up to \$350 resulting from such referrals required because of illness or injuries occurring in the Athens area will be paid by the University Mutual Health Fund if not covered by a student's private insurance. Specialists in all fields of medicine are available when needed through health service referrals.

Housing

The main purpose of the Housing Office is to assist students in acquiring housing on the Ohio University campus or in the Athens area. Admission to the University does not guarantee housing. Housing

is reserved on a first come, first served basis. Therefore, it is important that all students arrange their room reservations promptly.

The Housing Office is responsible for all residence hall and room assignments for students residing in University-owned residence halls and initiates all room and board charges.

The Director of Off-Campus and Married Student Housing supervises the assignment and maintenance of the married student apartment complexes and works directly with student residences in private homes in the Athens community.

This office insures that prescribed health and safety standards are maintained in private residences which are recommended for University students.

FRESHMEN. All freshmen, except those 21 years of age or over, must live in University residence halls during their first year. Exceptions to the housing requirement for freshmen may be made for the following: (1) a veteran of 24 months or more of active military service; (2) a special student carrying fewer than nine hours per quarter; (3) a married student living with his or her spouse in the community or within commuting distance of the University. *Requests for these exceptions must be made in writing to the Director of Housing.*

UNDERGRADUATES UNDER 21. All single undergraduate students who are not 21 by the first full day of classes of the fall, winter or spring quarter must live in University housing, associated housing or a recommended, supervised housing unit. *Exceptions to this regulation must be requested in writing from the Director of Housing.*

Insurance, Major Medical

A major medical insurance plan, specifically designed to supplement the care provided by the University Health Service, is mandatory for students at an annual premium of \$16 unless a student submits evidence that he is covered by a comparable private insurance plan. A major medical-surgical expense protection insurance plan for the dependents of married students is available through the University comprehensive group medical insurance policy. Benefits of the policy are excellent and are available for a very low premium.

Intercollegiate Athletics

Ohio University is a charter member of the Mid-American Conference which is composed of six prominent universities of the middle west. The other members are Miami, Toledo, Western Michigan, Kent and Bowling Green.

In the administration, financing, organization and management of the intercollegiate athletic program, the University adheres to the policies of the National Collegiate Athletic Association and the Mid-American Conference. All students are encouraged and welcomed to try out for any team of their choice. Ohio University teams go into competition thoroughly coached and trained. This training under excellent leadership

makes it a privilege and an honor to participate on athletic teams at the University.

Medical attention for athletic squads is under the direction of a team physician. He has at his disposal the personnel and facilities of a modern university hospital and is aided by a qualified and experienced trainer.

University teams are organized in the following sports: football, basketball, baseball, track, wrestling, cross country, golf, soccer, tennis, swimming and ice hockey. Any student interested in the athletic grant-in-aid program or any student wishing to try out for a team should contact the head coach of the sport(s) directly.

For women, intercollegiate competition is scheduled in field hockey, basketball, softball, swimming, golf and tennis. Women adhere to policies recommended by the Division for Girls' and Women's Sports and by the Women's Physical Education Section of the Ohio College Association.

International Students

Admission. Information concerning the admission of students from foreign countries may be obtained from the Director of Admissions, Ohio University.

Services. The Adviser to International Students and his staff are available for consultation and assistance on a variety of matters of concern to foreign students.

Intramural Sports and Recreational Activities

The University offers an extensive program of intramural sports for men and women. Students are encouraged to make use of available facilities in their leisure time. This provides a way for students to participate in sports and recreation. Upon request, clubs will be organized in sports or physical recreation activities as facilities and personnel are available.

Libraries

ALDEN LIBRARY

The new Alden Library houses the main collection of over 500,000 volumes, including periodical sets and documents. Current issues of over 4,800 periodicals and newspapers are available, plus extensive microfilm resources. The collection was moved from the Edwin Watts Chubb Library, which has served Ohio University since 1931, to the new library in February of 1969.

Built at a cost of 5.3 million dollars, the modern, seven-story, air-conditioned structure represents only the first phase of library construction; it has a capacity of 600,000 volumes and provides seating accommodations for approximately 3,400 students. The completion of the second construction phase will enable the library to house 1,200,000 volumes and to seat over 4,000 students.

OTHER COLLECTIONS

To supplement the library's book services, special collections of rare books and archives are maintained in the main library. Music and map collections are housed in other buildings and departmental collections exist among the scientific disciplines. Fully staffed separate libraries serve the outlying branch campuses.

Separate facilities in the main library house the Fine Arts Library, Special Collections, Governmental Documents, the Children's Library and the centralized microfilm collection.

LEARNING RESOURCES CENTER

The Learning Resources Center, also housed in the main library, provides audio/visual facilities and services to the entire faculty.

LIBRARY SCIENCE COURSES

In 1969/70, eight courses in library science were offered by members of the library staff.

Motor Vehicles

University policy and regulations require that all motor vehicles operated by students in Athens, including student-owned automobiles, automobiles belonging to parents or relatives, motorcycles and scooters, must be registered with the University. This registration includes permanent town residents, married students, commuters and graduate students. The registration will be completed during registration week and will register the vehicle for the entire academic year.

Upon registration each student will be given a windshield decal which must be attached to the lower right-hand corner of the windshield in accordance with state law.

If a car is brought to the campus after registration week it must be registered within 24 hours at the Office of the Director of Security.

Failure to register a motor vehicle will result in a fine and the student may be denied his driving privileges.

Freshmen and sophomores are not permitted by the University to bring automobiles to the Athens area.

Two-wheeled motor vehicles are not permitted on Ohio University property.

Placement and Internship Service

The Placement and Internship Service, located in Berry Hall on N. Court Street, is designed to assist all students and alumni who seek career or graduate school information. Those desiring permanent positions in education, business, industry, government or college teaching have opportunities for on-campus interviews with employers and may make use of a wide range of other career information and services.

The Internship Service is designed to help place undergraduates in career-oriented summer jobs with business, industry, government and social service agencies. Information is also available on other summer jobs with camps, resorts, sales organizations, etc.

Students planning to attend graduate school are encouraged to use the Graduate School and Career Plans Library which contains a wide array of graduate school catalogs and literature on scholarships, fellowships and loans. The facility is a part of the Placement and Internship Service.

Psychological Services

The Center for Psychological Services provides confidential professional counseling for undergraduate and graduate students who have educational, career and personal adjustment concerns. Students who are having educational difficulties may receive help in clarifying and resolving their concerns. Students who are uncertain about their educational and career objectives can obtain help in appraising their aptitudes, interests, performances and personal characteristics so that they may make appropriate and satisfying decisions.

An extensive information file is available concerning career and occupational opportunities.

Students who have personal adjustment problems including those of an emotional, social or marital nature may receive assistance in better understanding and resolving their problems.

Any student who wishes to obtain confidential consultations about educational, career and personal adjustment concerns can do so by contacting the receptionist at the McKee House, 44 University Terrace, between the hours of 8 a.m. and 5 p.m., Monday through Friday.

Residence Life

The Residence Life Program is responsible for advising and coordinating 9,000 undergraduate students in 48 residence halls located on the East, South, College and West Greens. These residence halls are directed by staff members who participate in orientation programs as well as continual in-service training programs conducted by the Office of Residence Life, located in McGuffey Hall.

The administrative staff of most residence halls consists of a resident director and a graduate or undergraduate assistant. In addition there is a resident assistant for each group of approximately 50 students. These staff members are available for advice, assistance in the case of an emergency and general assistance with individual problems.

The resident director works with the students to develop a constructive program of self-government, recreation and cultural experience. Also, he or she participates in orientation programs and serves as an adviser to hall organizations and committees. The resident director is either a full-time staff member or a graduate student. As the representative of the dean of residence life, the resident director interprets University and administrative procedures and policies to the students and makes the students' concerns known to the personnel staff.

The assistant is a graduate or undergraduate student who works closely with the resident director in assisting individual students and advising student groups within the hall.

The resident assistants are upperclass or graduate students who assist with the personnel and administrative function of the residence halls. As

fellow students and hall residents, they are aware of the academic and social problems students encounter and endeavor to assist students in their adjustment to living in a residence hall.

Speech and Hearing Services

The Speech and Hearing Clinic offers diagnostic and remedial services without charge to University students. Clinical services are available to children and adults of the community and surrounding area for a nominal charge. All types of speech and/or hearing disorders in all age ranges are evaluated and receive therapy. The audiological division is equipped and staffed to provide complete hearing diagnostic services, to determine the need for and recommend special kinds of hearing aids and to provide therapy for all types of hearing loss.

A program for language and speech development operates in the on-campus clinic five days a week, and four regional county clinics see over 150 clients every Saturday. Undergraduate and graduate students prepare for clinical practice in public schools, special schools, private clinics, hospital and rehabilitation center clinics or university teaching and research. Persons wishing counseling about the training program, information about the service program or help with a speech or hearing problem should inquire at the clinic office in the basement of Ewing Hall between the hours of 8 a.m. and 5 p.m., Monday through Friday.

Profile of Ohio University

Since its establishment in 1804, Ohio University has made a continuous effort to keep itself abreast of change, improving its offerings and gearing the curricula to meet the current needs of its students.

Ohio University's eight colleges give a breadth of educational possibilities that only a university can offer. The mutual relationship among the colleges allows a student in one college to take courses in the others. He can choose among approximately 100 undergraduate areas of study, 46 master's degree programs and 19 doctoral areas. Ohio University students find their instructors—735 full-time faculty members, more than 90 part-time faculty and over 400 graduate teaching assistants—have time to spend in counseling and help sessions. The relatively small size of most classes gives the instructors an opportunity to know their students as individuals.

The oldest and largest college in the University, the College of Arts and Sciences, is made up of 17 departments in the humanities, social science and natural science areas.

The School of Accounting and departments within the College of Business Administration provide training in professional business fields.

The College of Communication has jurisdiction over four schools—Hearing and Speech Sciences, Interpersonal Communication, Journalism and Radio-Television.

The College of Education contains two schools—the School of Home Economics and the School of Health, Physical Education and Recreation.

The College of Engineering and Technology is divided into departments which represent the different aspects of the engineering profession: chemical, civil, electrical, mechanical and industrial and systems engineering.

The College of Fine Arts has under its auspices the School of Architecture, Design and Planning; the School of Art; the School of Dance; the School of Music, the School of Theater and the Program in Film.

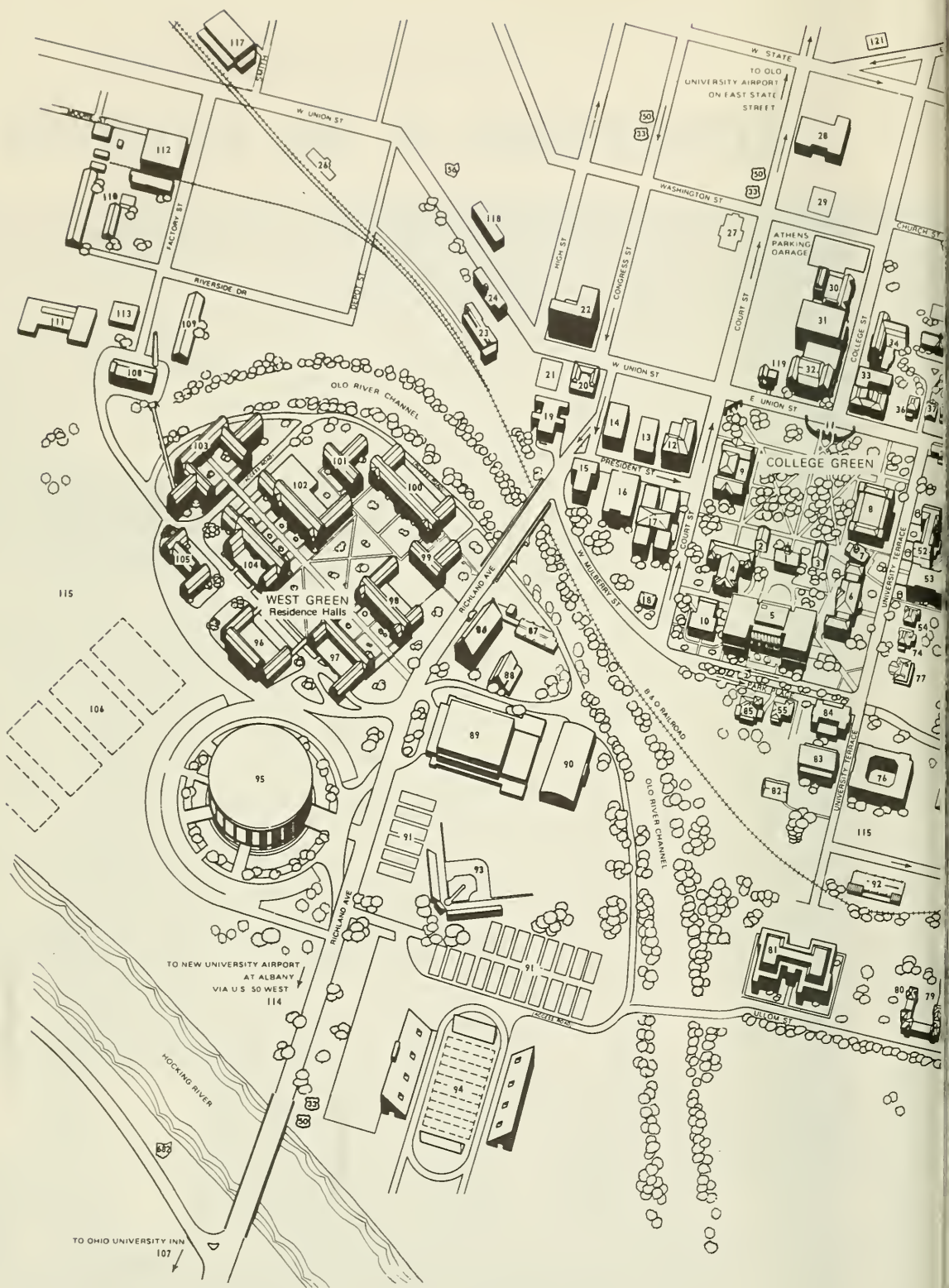
Freshmen and sophomores at Ohio University study in the University College until they qualify for advancement into one of the degree-granting colleges. If they prefer, they may earn either the two-year associate in arts degree or the four-year bachelor of general studies degree within the University College.

The Graduate College has jurisdiction over the requirements and standards for the master's and doctoral degree areas of the University.

Ohio University stands ready to encourage all those who approach in the spirit of the motto carved into the old campus gate on the Athens campus—"So enter that daily thou mayest grow in knowledge, wisdom and love."

Organization of the University

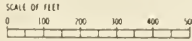






Ohio University Campus Athens, Ohio

Prepared by the Office of University Publications, revised 1971



- 1 Cutler
- 2 McGuffey
- 3 Wilson
- 4 University College office
- 5 Ewing
- 6 Library, Alden
- 7 Ellis
- 8 Galbreath Chapel
- 9 Memorial Auditorium
- 10 Chubb Building
- 11 Carnegie
- 12 Class Gateway
- 13 Copeland
- 14 Business Administration, college
- 15 Chemistry
- 16 Morton Hall
- 17 Super
- 18 Bentley
- 19 Lindley Hall
- 20 Chubb House
- 21 Engineering and Technology, college
- 22 Hanning
- 23 Graduate College, office
- 24 Athens Messenger
- 25 Bromley Hall
- 26 Heating Substation
- 27 Industrial Technology
- 28 56 E. Union Street
- 29 Railroad Station
- 30 Athens County Court House
- 31 Berry
- 32 Athens City Building
- 33 Speech and Theater
- 34 Radio-Television Communication
- 35 Communication, college office
- 36 WOUB-TV Studios
- 37 Baker Center
- 38 Howard Hall
- 39 Voigt Hall
- 40 Hudson Health Center
- 41 Off-Campus Academic Programs
- 42 Jennings House
- 43 Brown House
- 44 Seigfried
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- 46 Music Building
- 47 Putnam Laboratory School
- 48 McCracken
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- 53 Jefferson Hall
- 54 Johnson Hall
- 55 Read Hall
- 56 Washington Hall
- 57 Bush Hall
- 58 Biddle Hall
- 59 Bryan Hall
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- 84 Scott Quadrangle
- 85 Leete House
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- 87 Wolfe Hall (Wolfe St. Apts.)
- 88 Ullom Hall (Wolfe St. Apts.)
- 89 Clippinger Laboratories
- 90 Accelerator Laboratory
- 91 Naylorium
- 92 Gordy Hall
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- 96 Botany Building
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Academic Organization

The University College

Basic preparation for admission to each of the degree-granting colleges. Two-year terminal programs leading to the associate in arts, associate in science and associate in applied science degrees. Four-year program leading to the bachelor of general studies degree.

Reserve Officers Training Corps

Aerospace Studies
Military Science

The College of Arts and Sciences

Preprofessional curricula. Curricula leading to the bachelor of arts and bachelor of science degrees. Preparation for teaching at the secondary level.

Departments:

Botany	Mathematics and Astronomy
Chemistry	Modern Languages
Classical Languages	French Portuguese
English Language and Literature	German Russian
Geography	Italian Spanish
Geology	Philosophy
Government	Physics
History	Psychology
Linguistics	Social Work
	Sociology and Anthropology
	Zoology and Microbiology

The College of Business Administration

Curricula leading to the bachelor of business administration degree.

School of Accounting

Departments:

Business Administration	Finance
Business and Industrial Communication	Management and Organizational Behavior
Business Law	Marketing
Economic Education	Quantitative Methods
Economics	

The College of Communication

Curricula leading to the bachelor of science in hearing and speech sciences, bachelor of science in communication and bachelor of science in journalism degrees.

Schools:

Hearing and Speech Sciences	Journalism
Interpersonal Communication	Radio-Television

The College of Education

Teacher-training curricula leading to the bachelor of science in education degree and curricula leading to the bachelor of science in home economics degree.

Schools:

Health, Physical Education and Recreation
Health Education
Physical Education
Recreation Education
Home Economics

Departments:

Elementary Education	Center for Educational
Secondary Education	Research and Services
Student Teaching	University Laboratory School
Teaching Certificates	Cooperative Center for Social
Guidance, Counseling and	Science Education
Student Personnel Services	

The College of Engineering and Technology

Curricula leading to the bachelor of science in chemical engineering, bachelor of science in civil engineering, bachelor of science in electrical engineering, bachelor of science in industrial and systems engineering, bachelor of science in mechanical engineering and bachelor of science in industrial technology degrees.

Departments:

Chemical	Industrial and Systems
Civil	Industrial Technology
Electrical	Industrial Arts (Teaching)
Engineering Graphics	Industrial Technology
	Mechanical

The College of Fine Arts

Curricula leading to the bachelor of art in architecture, bachelor of fine arts and bachelor of music degrees.

Schools:

Architecture, Design and Planning	
Architecture	Industrial Design
Graphic Design	Interior Design

Art

Art Education
Art History
Ceramics
Painting

Photography
Printmaking
Sculpture

Dance

Dance

Music

Applied Music
Music Education
Music History and Literature

Music Therapy
Theory and Composition

Theater

Acting
Children's Drama
Production Design

General Theater
Playwriting
Theater Education

Department of Comparative Arts

Additional Curricula and Programs

Office of Afro-American Studies

Established to encourage students to develop individual perspectives concerning the role of the black man in modern society and to train intellectuals as agents of community change.

Honors College

Attempts to provide the most flexible and challenging education possible both to the academically gifted and to the creative students.

International Studies

Offers a Certificate of African, Asian or Latin American Studies to undergraduates as a supplement to the student's major.

African Studies

Southeast Asian Studies

Latin American Studies

Off-Campus Academic Programs

Academic Center at Ironton

Branch Campuses

Belmont County

Portsmouth

Chillicothe

Zanesville

Lancaster

Educational Center at Lockbourne Air Force Base

Extension Division

Continuing Education through Correspondence

Extension Classes

Workshops, Conferences and Institutes

Ohio Program of Intensive English

Provides training in the English language designed to raise the proficiency of the non-native speaker to a level at which he is able to undertake academic study in an American college or university.

The Graduate College

Programs leading to the master of arts, master of business administration, master of education, master of fine arts, master of science and doctor of philosophy degrees.

University Administration

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